



FONTGRAPHER

The ABC's
TUTORIAL

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Credits

Fontographer was written and developed by Jim Von Ehr, David Spells, James Brasure, Tom Irby, David Fung, Eon Chang, and Parry Kejriwal.

This tutorial was written by Katharine Green with editing by Earl Allen, Peter Mason, and Meaghan Hogan. Special thanks to Janis Coppedge, Dianne Badenhop, and George Sullivan, Jr.



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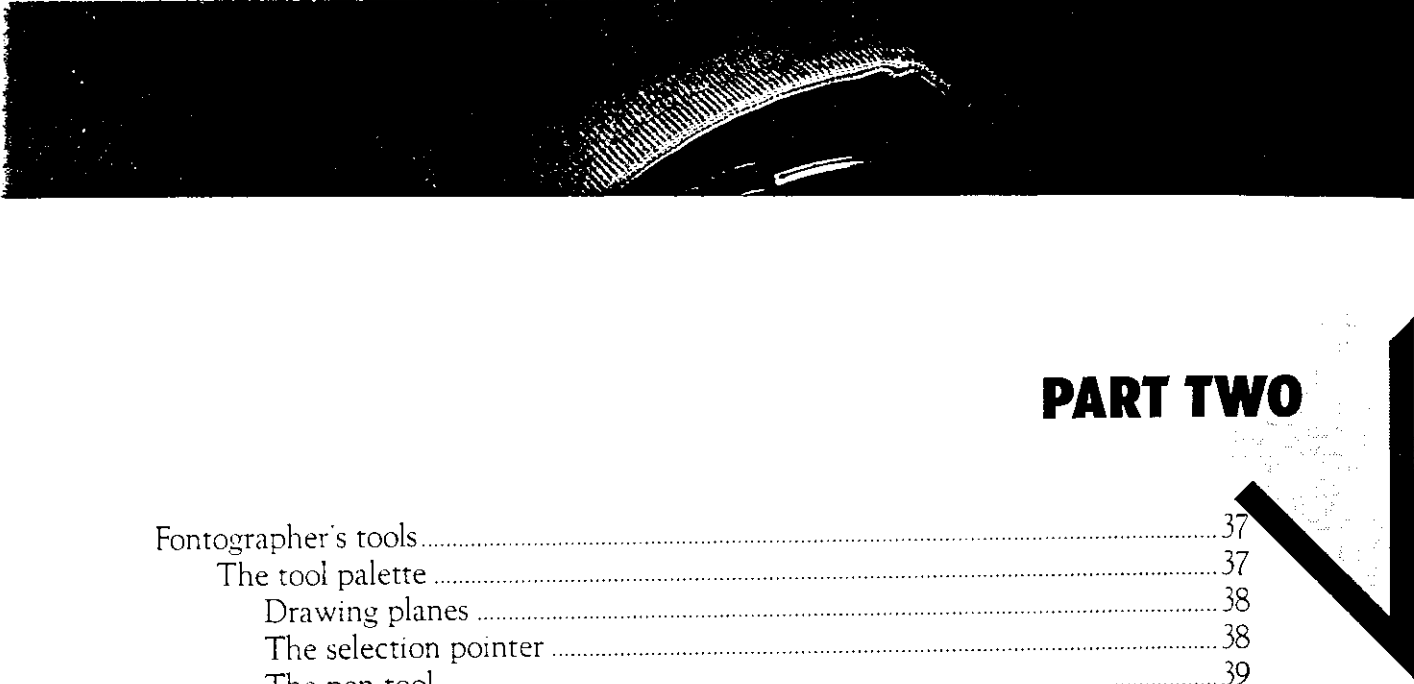
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Introducing Fontographer...

Welcome to Fontographer® 3.3. Since its introduction in 1986, Fontographer has been the standard for professional typeface and logo design on the Apple Macintosh®. Before Fontographer, typed images could only be produced using complex, expensive, and time-consuming procedures. Now, Fontographer provides this capability to the world of computers and, more personally, to you.

Fontographer is a specialized graphics editor designed to simplify the creation of high quality TrueType™ and PostScript® language fonts, typefaces, foreign character sets, logos, and other intricate artwork. Fontographer provides the means to assign your type and graphic images to any key or combination of keys, and the added ability to instantly repeat and resize those images in any application. Whether you begin with a scanned image, an existing typeface, or draw from scratch—it's easy to design fonts with Fontographer.

Fontographer, The ABC's is designed to teach you Fontographer's basics. When you have finished it, you should have a good understanding of Fontographer and be ready to unleash the typographic potential of your Macintosh.

How to use this tutorial

Whether you are a professional typographer or a newcomer to the field, this tutorial will assist you in learning and using Fontographer.

One of the best ways to discover how a program works is by using it. You will start using Fontographer immediately by learning how to modify a font. We've included the PostScript typeface "GraphicLight" which was provided by Richard Mitchell, who designed it for his publication, *The Underground Grammarian*.

This manual is divided into two parts. Part One focuses on the beginning aspects of Fontographer; Part Two contains more advanced information. Exercises have been interspersed throughout both parts; we recommend that you complete them all.



The first time key words appear in a section, they are italicized in bold lettering. Keyboard shortcuts are enclosed in parentheses. These are the "quick commands" that more experienced users prefer. These commands will become automatic very quickly if you get into the habit of using them now.

Before you begin...

We assume that you are familiar with the basics of using your Macintosh. You should already understand and be able to use:

- Menus
- Selections with the mouse
- Standard cut, copy and paste commands
- Windows and scroll bars
- Your System's Scrapbook

If you don't know how to use these features, you should refer to your *Macintosh Owner's Manual*.

What you need in order to use Fontographer...

You must have a Macintosh computer with at least 1 Megabyte of memory (Macintosh Plus, Macintosh Classic, Macintosh SE, Macintosh LC, and the rest of the Macintosh II family of computers). An external disk drive or hard disk is also required. If you want to print high-resolution copies of the characters you create, you will also need a PostScript-compatible printer.

You should immediately make a copy of the Fontographer Program disk and run only from the copy. Copies of the disk can be made using the Finder or any backup program.

Fontographer can be run on a two disk drive system, or a system with a hard disk. The program disk is configured for a two disk drive system. To run Fontographer, you should insert a system disk into the internal drive and a copy of the program disk into the external drive, or install Fontographer onto your hard disk.

Getting started...

When you're ready to begin, follow these steps to start Fontographer:

- Turn your computer on and insert a system disk into the internal drive.

The System file on the disk you use must be version 4.2 or later. If you are unsure of the version on your computer, go to the Apple menu and select the item that says, "About the Finder..." If you have a hard disk, you can just start your computer the same way you always do.

- Insert the Fontographer disk into an open disk slot.

Optional:

At this point, you should replace the Scrapbook File in your System folder if you plan to utilize the auto-tracing section in this tutorial.

- Rename the "Scrapbook File" that is located in your System Folder to "Old Scrapbook File."
- Copy the "Scrapbook File" provided on the Fontographer Program disk into your System Folder.
- When you are through with this tutorial, remove the Fontographer Scrapbook File and change the name of your "Old Scrapbook File" back to "Scrapbook File."

Now you are ready to begin *Fontographer, The ABC's... Part One*.

PART ONE

FONTGRAPHER BASICS

- Start Fontographer by double-clicking on its icon.



Fontographer® 3.3

Fontographer will display an opening screen that contains copyright and version information.

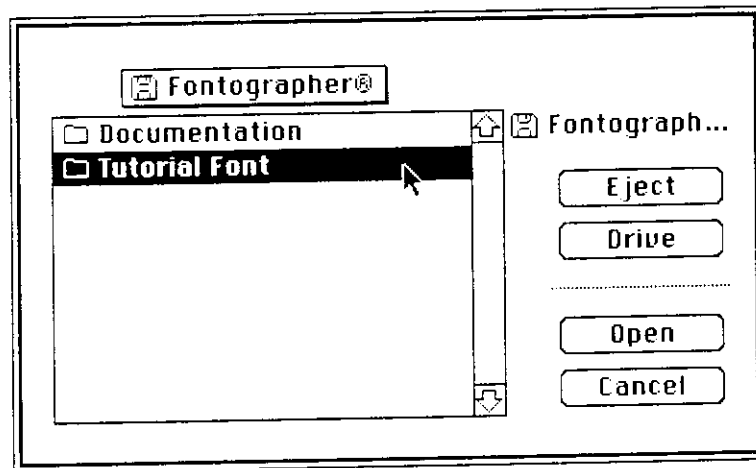
- When you see the menu bar appear, go to the File menu and choose "Open font..." (⌘O).



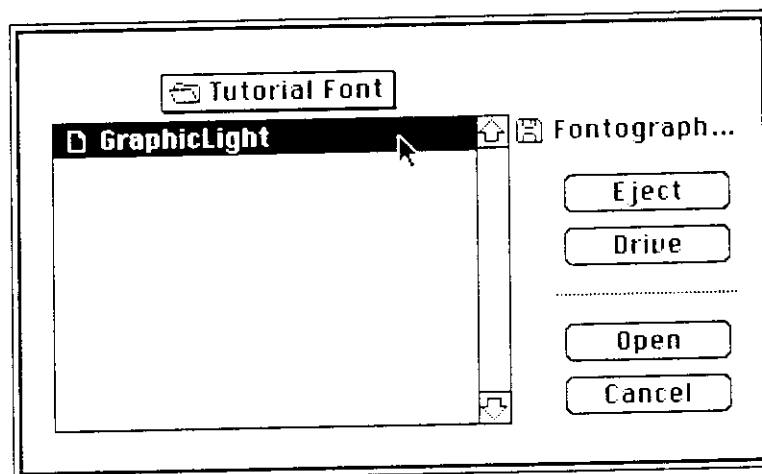
Fontographer will display a dialog box which lists all the Fontographer documents on the current disk.

- Click "Drive" until you see the Fontographer disk.

- Open the "Tutorial Font" folder.

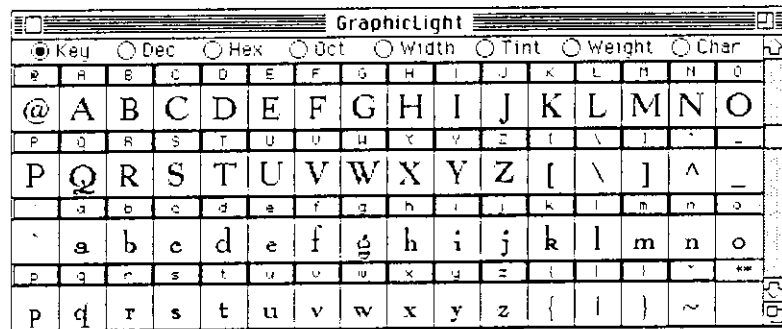


- Select "GraphicLight" and click "Open."



Note: Fontographer allows you to open most outline fonts (including TrueType). For the purposes of this tutorial, you can use Richard Mitchell's GraphicLight.

You should now see the font window below on your screen.



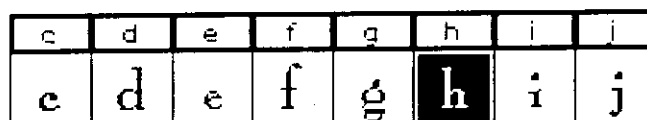
The *font window* shows some of the characters in the typeface we're going to edit. Each font is composed of 256 character slots which correspond to characters that can be typed from the keyboard. Certain parts of the font window should be familiar to you since it looks like most Macintosh windows. The font window has a title bar, close box, vertical scroll bar, and size box. You can use the size box in the lower right hand corner to reduce or enlarge the font window. And you can use the scroll bar to view the rest of the font window.

Selected characters

The lower portion of the character slot contains a 24-point bitmap image that corresponds to that particular character. Fontographer shows any selected characters as inverted boxes in the character slot's lower position. You can select a single character either by clicking on its character slot with the selection pointer, or by typing it on the keyboard.

EXERCISE: Selecting a character

- Type "h" on your keyboard. Notice that Fontographer highlights the typed entry.



In order to create or modify an image for a character, you must open its character edit window.

EXERCISE: Opening a character edit window

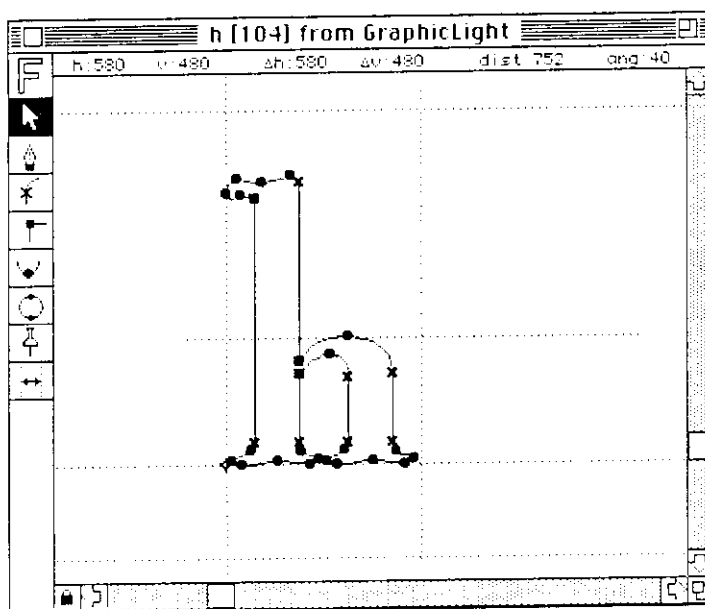
- Make sure the "h" is still selected.
- Double-click on the "h" character slot.

OR

- Click on the "h" to select it and press ⌘H.

THE CHARACTER EDIT WINDOW

The *character edit window* has the familiar Macintosh title bar which shows the PostScript name (h) and the ASCII value (104) of the character within the window, followed by the name of the font (GraphicLight) it comes from. ASCII (American Standard Code for Information Interchange) is a numbering scheme used for printing characters.



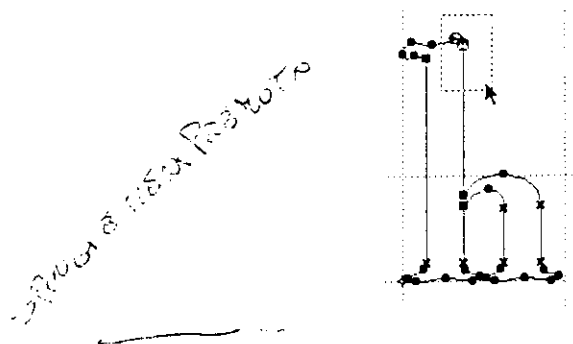
The central portion of the window is the *drawing area*. The outline of the character image is displayed in solid lines. The dotted lines you see around the character are guidelines which assist you in drawing and editing the character.

The points you see on the outline of the character image are known as control points. By moving the control points, you can change the outline of the character.

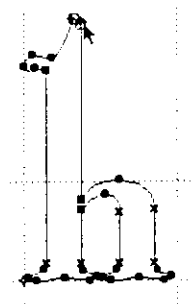
EXERCISE: Moving points

- With your selection pointer, drag around some control points.

When you select a point (making it active), it appears to be hollow.



- Press and hold the mouse button, drag the control points to a new location, and release.



Try moving some of the other points to see what happens. If you don't like the results, there is an easy way to move the point back...

UNDO AND REDO

Fontographer supports "Undo" and "Redo" of your last eight edit operations.

EXERCISE: To undo any action

- Go to the Edit menu and Choose "Undo move points" (⌘Z).



EXERCISE: To redo any action

- Go to the Edit menu and choose "Redo Move points" (⌘Z).

REVERT

You can also "Revert" back to the last saved version of the font. You can only "Revert" when the font window is active.

EXERCISE: To revert to the last saved version of the font

- Click on the font window to select it.
- Go to the File menu and choose "Revert."

Note: Fontographer will ask you if it's "OK" to revert, since it discards any changes you have made since the last time you saved the font.

- Click "OK."

MODIFYING AN EXISTING CHARACTER

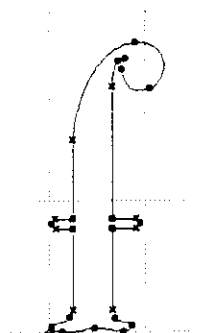
In order to experiment with Fontographer's editing capabilities, you will modify the character "f." First you will skew the letter "f."

Creating an oblique character

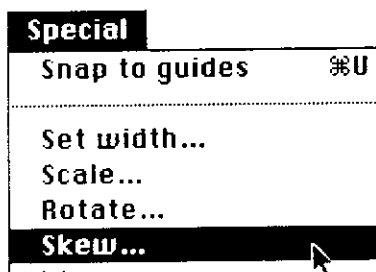
By using the "Skew" feature, you can create your own oblique font. You may consider this an easy way to make an italic typeface. Fontographer allows you to skew one, several, or all characters at once.

EXERCISE: Skewing a character

- Go to the font window and double-click on the character "f" to open it.



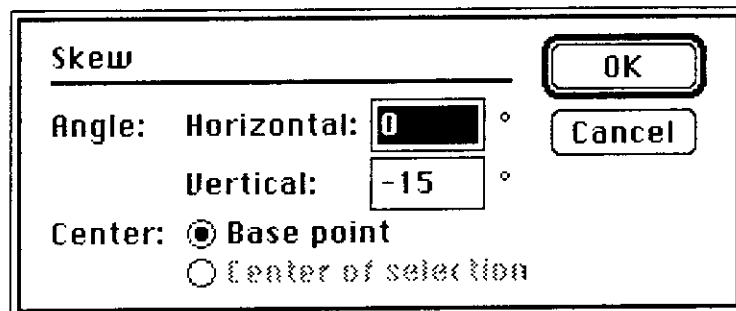
- Go to the Special menu and choose "Skew..."



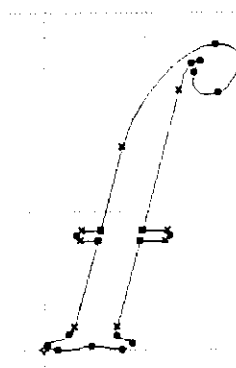
PROCEDURE PER MODIFICARE L'ANGOLO DELLA LETTERA

The "Skew" dialog box appears.

Fontographer automatically defaults to a vertical skew of -15 degrees.



- Click "OK" and your letter "f" is now skewed.



Note: Fontographer doesn't use valuable time automatically regenerating each bitmap every time you make a change, so the 24-point bitmap image in the font window remains unchanged until you regenerate the bitmap character. Bitmap generation is discussed on page 32 of this Tutorial.

You can use Fontographer's metrics window to preview your new obliques character.

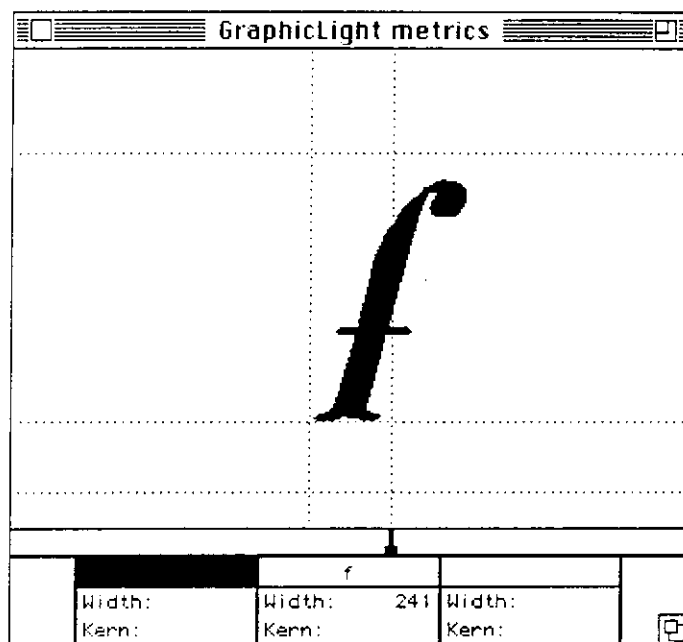
PROCEDURA X AUTOPRINTA DI COSI' SARE' LA VERSIONE
DISegnata o MODIFICATA

EXERCISE: Previewing your character

You can open the metrics window from either the font window or the character edit window. This time you will open it from the character edit window, since you already have the "f" open.

- Go to the File menu and choose "Open metrics" (⌘K).

Fontographer's metrics window appears.



Fontographer automatically updates the metrics window to reflect any changes you make in the character edit window. The metrics window can remain open while you make your changes to the character edit window. And, like any of Fontographer's windows, the metrics window can be resized to suit your individual preference.

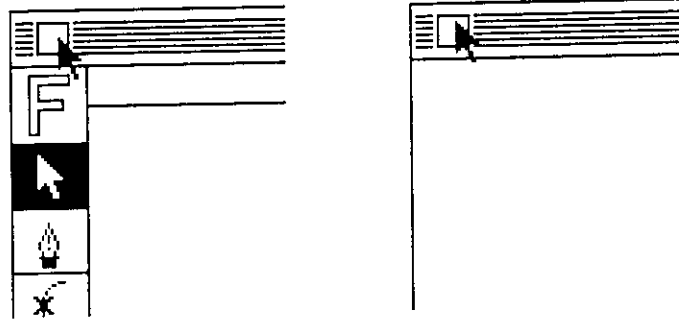
Note: The metrics window is also used to set character kerning and offset. You can learn more about these features in Part Two which begins on page 37.

Now you've seen just how simple it is to modify a character with Fontographer. And, if you select all the characters in the font window, you can apply this modification to the entire font at once. You'll see how easy that can be in our next exercise.

First though, you can close your character and metrics windows.

EXERCISE: Closing a window

- Position the pointer over the close box in the upper left-hand corner of each window and click.



Procedure for modifying in AUTOMATIC ACTIVE VERTICES
 IN BASE AND MODIFIERS APPROPRIATE AND 1- CBTED LAYOUT

Creating a condensed character

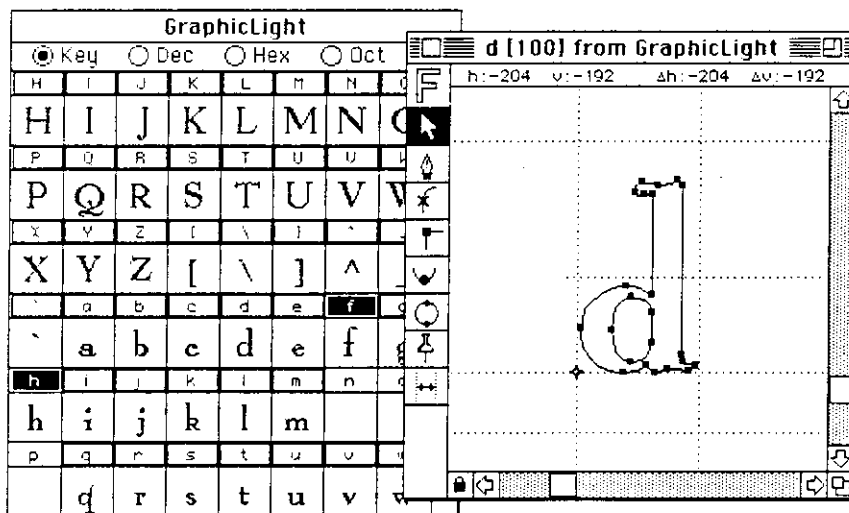
Next, you will modify the characters "a" through "e" to create a group of condensed characters. A *condensed character* is the same height as the character it is taken from, but narrower to fit into a more compact space.

Note: It is not necessary to have a character edit window open to modify more than one character at once, but for the sake of this demonstration (and so you can see your results instantly), you will open a character edit window first.

EXERCISE: Scaling a character

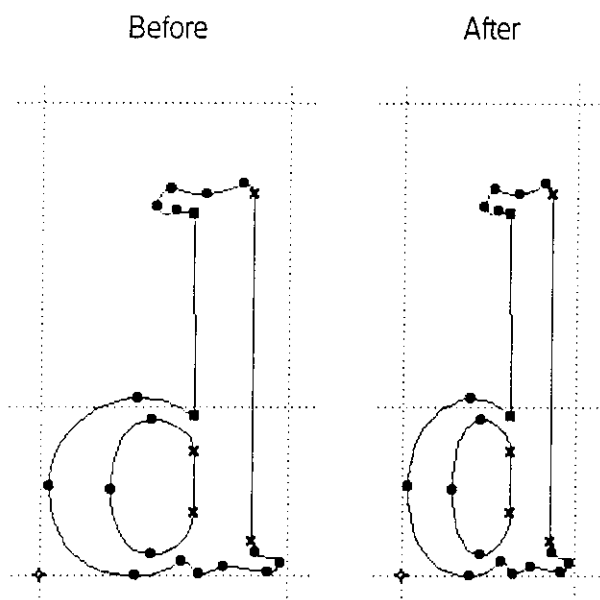
- Go to the font window and double-click on the character "d."

Fontographer's character edit window opens. Scale and position the windows so that you can see the letters "a" through "e" in the font window, and the "d" in the character edit window simultaneously.



- Click on the "Other" radio button and enter a horizontal scale factor of "70."
- Click "OK."

As you can see from the "Before" and "After" screen shots below, Fontographer has scaled the "d" horizontally from its basepoint without changing the height of the character.



By selecting groups of characters in the font window and choosing the "Scale" option, you can scale one, several, or all characters in the font at once. You can view the other characters you scaled directly from their character edit windows or the metrics window.

Note: Fontographer has automatically adjusted the width of the scaled character.

Before you go on to the next exercise, close any character edit windows or metrics windows you may have opened.

Creating a fraction

Now you will create the fraction "3/4" by using Fontographer's "Copy," "Get part," "Paste," and "Scale..." commands. First though, you will delete the "n" from its character slot, so you can use it for this exercise.

EXERCISE: Creating a fraction

- Go to the font window and double-click on the "n" to open it.
- Go to the Edit menu and choose "Select all" (⌘A).
- Go to the Edit menu and choose "Clear."
- Go to the font window and click on the number "3" to select it.
- Go to the Edit menu and choose "Get part" (⌘G).

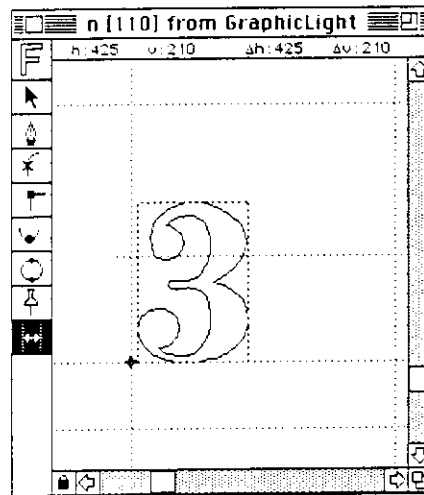
Fontographer's "Get part" command is similar to the "Copy" command, except that it references (or makes a composite of) the original character. Therefore, when you paste the composite character into another character slot, you will not see the points you normally see. Additionally, when you paste the number "3," you will notice that the newly pasted composite is easier to move since you don't have to worry about selecting points.

- Click on the "n" character edit window.

Scale and position the windows so that you can see the letter "n" in the font window, and the (temporarily empty) character edit window simultaneously.

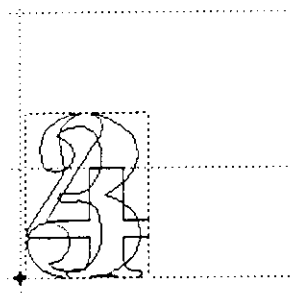
- Go to the Edit menu and choose "Paste" (⌘V).

Fontographer pastes the number "3" into the character edit window.



- Go to the font window and click on the "4" to select it.
- Go to the Edit menu and choose "Get part" (⌘G).
- Click on the "n" character edit window.
- Go to the Edit menu and choose "Paste" (⌘V).

Fontographer pastes the number "4" on top of the number "3."



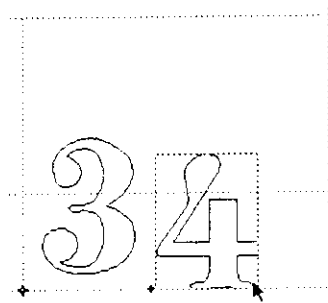
- Go to the Edit menu and choose "Select all" (⌘A).
- Go to the Special menu and choose "Scale..."
- Enter a "Uniform scaling:" factor of 80%.
- Click on the "Center of selection" button.
- Click "OK."

Fontographer scales both characters to 80% of their original size.

- Position your pointer anywhere outside the area of the two characters and click.

Fontographer deselects the characters.

- Position your pointer over both characters and click on the outline of the "4." You will see a box (with dotted lines) appear.

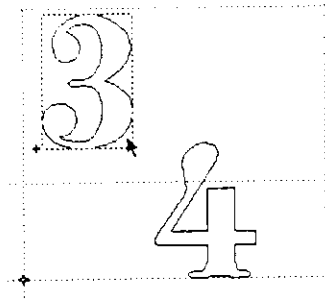


- Drag the box containing the "4" towards the lower right-hand corner.

Now you will move the number "3" using the same steps.

- Position your pointer over the "3" and click. You will see a box (with dotted lines) appear.

- Drag the box containing the "3" toward the upper left-hand corner.



Now you will paste the backslash into your character edit window to use as the fraction's dividing line.

You could also draw the backslash character if you preferred. However, it is often much easier to use the same "Get part" command you used earlier to copy an existing character.

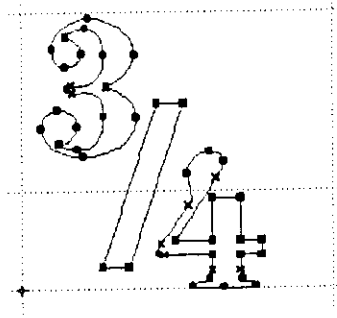
- Select the backslash character by clicking on the font window and typing "\".
- Go to the Edit menu and choose "Get part" (⌘G).
- Click on the "n" character edit window and then go to the Edit menu and choose "Paste" (⌘V).

Fontographer pastes the backslash character into the window.

- Drag the backslash until it is centered between the "3" and the "4."
- Go to the Special menu and choose "Scale..." and uniformly scale the backslash 80%.

You can break all the composite characters into paths you can modify (meaning that you'll be able to access and edit the points) by choosing "Decompose composite" from the Special menu.

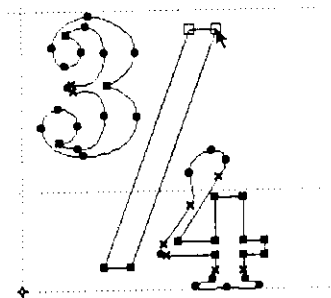
- Go to the Special menu and choose "Decompose composite."



As you can see, the characters' points are now visible and you can move them individually, or together as a group.

Now you will move the control points on the backslash character to complete your fraction.

- With your selection pointer, drag around the upper two control points on the backslash character, so they appear hollow.
- Drag the two control points towards the upper right-hand corner.



- Click somewhere else in the character edit window to deselect the two control points.
- Hold down the Shift key and click on the lower two control points on the backslash character.

- Drag the two control points towards the lower left-hand corner.

You can also try moving the points individually to create different shapes.

You can use Fontographer's metrics window to preview your new fraction character.

- Go to the File menu and choose "Open metrics" (⌘K).

See how easy that was? Without drawing a thing, you've created your first special character. And you can do this for any fractions, symbols, or other unique characters you can think of.

Before you begin the next exercise, close any character edit windows or metrics windows you may have opened.



AUTO-TRACE

The auto-trace option is one of Fontographer's most advanced features. You may have an existing character, logo, or image that you want to recreate as a font character in Fontographer. You can scan your image, save it in PICT format, and place it into your Scrapbook. Then you can paste your character into the character edit window (using it like a background template) and let Fontographer auto-trace the image.

Now we'll try something a little more ambitious: creating a unique logo character for a fictitious company named "Quate Enterprises." You are going to create this logo by using a scanned character. Actually, you won't have to scan anything since you already have an image of the letter in the Scrapbook we provided on the Fontographer disk(s). All you have to do is "Paste" the image into the character edit window and let Fontographer trace around it.

Creating a character from a scanned image

Delete the "o" from its character slot, so you can use it for this exercise.

- Go to the font window and double-click on the "o" to open it.

The "o" character edit window opens.

- Go to the Edit menu and choose "Select all" ⌘A.
- Go to the Edit menu and choose "Clear."

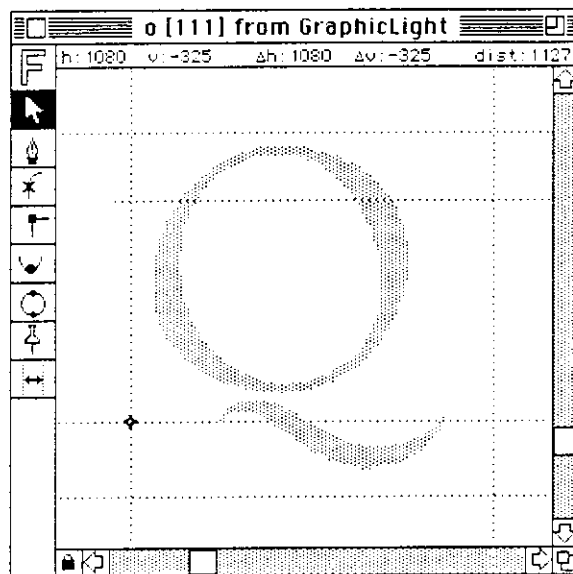
Now you will paste the scanned image into the character edit window.

Important: Make sure you have replaced your original Scrapbook according to the instructions in the "Before you begin..." section before you start this exercise.

EXERCISE: Pasting an image

- Go to your desk accessories menu (under the Apple) and select your Scrapbook.
- Scroll through the Scrapbook until the letter "Q" appears.
- "Copy" the "Q" from the Scrapbook and "Paste" it into the character edit window.

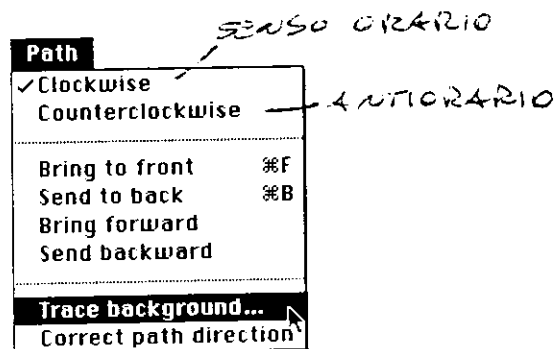
Fontographer automatically pastes the "Q" into the background. The background is always shown as a grayed-out image so that it may be distinguished from the foreground.



Now you are ready to auto-trace the "Q."

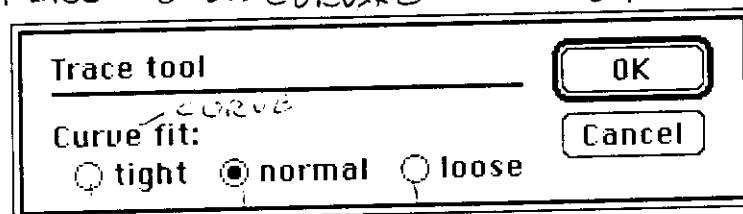
EXERCISE: Auto-tracing a character

- Go to the Path menu and choose "Trace background..."



The "Trace tool" dialog box will appear. Fontographer automatically selects a curve fit of normal. You do not have to change this setting.

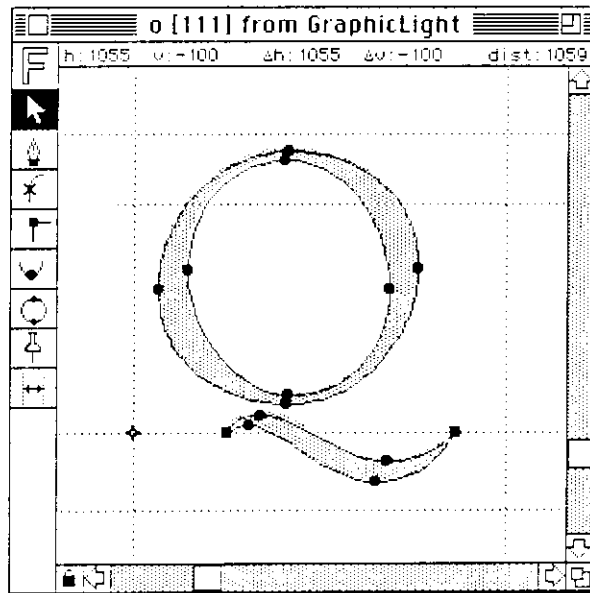
Per il comp. si dice se la curva è normale, stretta o larga



- Click "OK."

The "Tracing background" dialog box will appear showing the tracing status.

When Fontographer is finished tracing, the character's background image will be outlined, complete with control points.

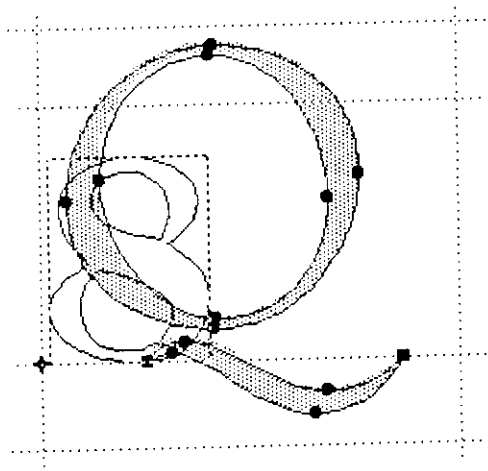


If you like, you can use the metrics window to preview the character "Q" you just finished auto-tracing.

Now you are going to paste the character "8" into this character window.

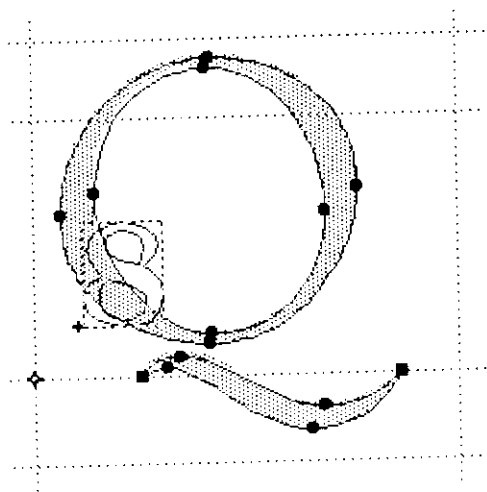
- Click on the number "8" in the font window to select it.
- Go to the Edit menu and choose "Get part" (⌘G).
- Click on the "o" character edit window to select it.
- Go to the Edit menu and choose "Paste" (⌘V).

Fontographer pastes the number "8" on top of the letter "Q."

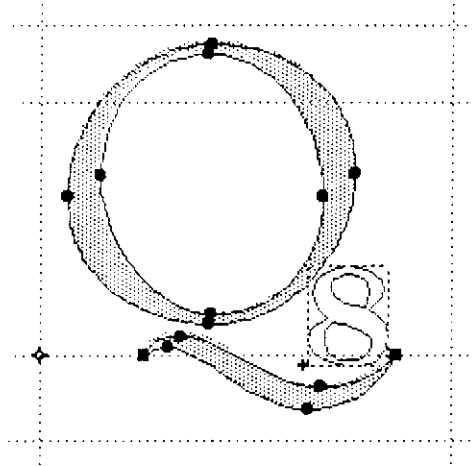


- Go to the Special menu and select "Scale..."
- Check the "Uniform scaling;" button, and enter a value of "50."
- Check the "Center of selection" button and click "OK."

Fontographer automatically scales the "8" since it is still selected after being pasted.

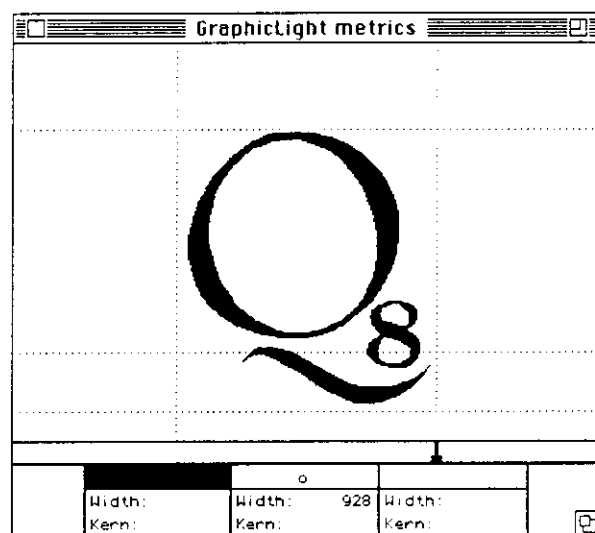


- Position your selection pointer over the "8" and drag it until it rests just over the tail of the "Q."



- Go to the Special menu, choose "Decompose composite," and you're done!

You can use Fontographer's metrics window to preview your new character.



You see how easy it was to create a character consisting of more than one element? Why not try a few other combinations and see what new and unique images you can design.

Before you begin the next exercise, close any character edit windows or metrics windows you may have opened.

CREATING A CHARACTER FROM SCRATCH

It's really very easy to create your own characters from scratch. You can draw very quickly by using the tools provided in Fontographer's tool palette. If you would like more detailed information about Fontographer's tool palette, refer to Part Two of this tutorial.

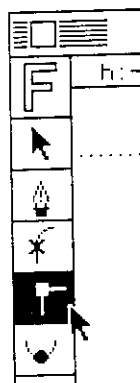
Delete the "p" from its character slot, so you can use it for this exercise.

EXERCISE: Selecting and placing control points.

- Double-click on the "p" in the font window to open it.

The "p" character edit window opens. The drawing area is blank except for the guidelines, which we have already established.

- Select the corner point tool by clicking on it.

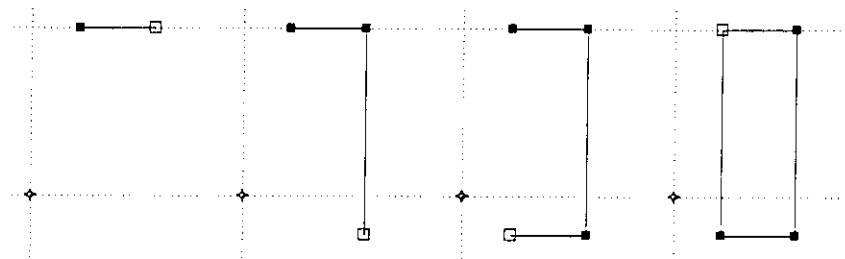


- Place the pointer anywhere in the drawing area, hold down the Shift key, and click.

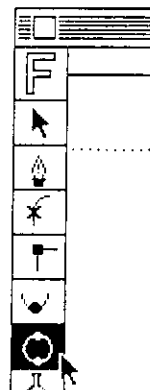
Note: Holding down the Shift key will constrain drawing to either horizontal or vertical straight lines which is helpful in drawing the rectangle you're about to create.

We have placed a guideline in the window to assist you in drawing your character. This guideline represents the character's x-height. To learn more about guidelines and x-heights, refer to Part Two of this tutorial.

- Continue placing points by holding down the Shift key, moving the pointer, and clicking.
- Click on the first point you placed to close the path and form a rectangle.

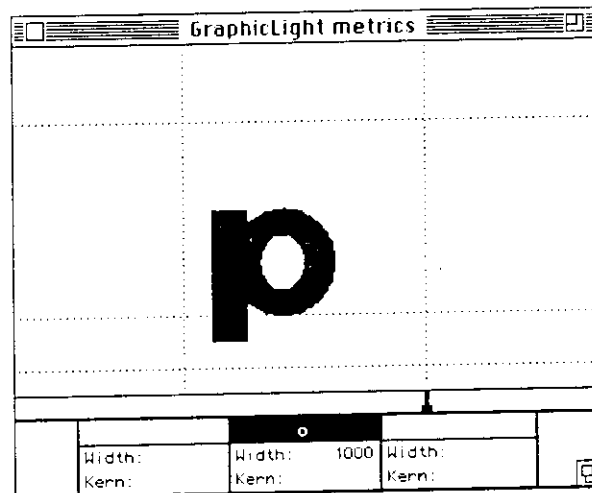


- Now click on the "Circle" tool.



Open the metrics window to preview your new character.

- Go to the File menu and select "Open metrics" (⌘K).

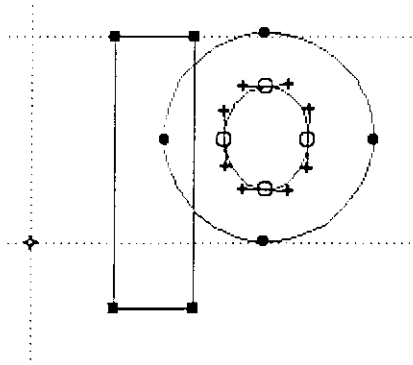


You see how easy it was to create your own character?

Now that you have created the "p" you can experiment with the "Flip..." command to create a "q," "b," and "d."

- Go to the Edit menu and choose "Select all" (⌘A).
- * Go to the Special menu and choose "Flip..." to see what happens to the "p" when you check the "Horizontal" and "Vertical" radio buttons.

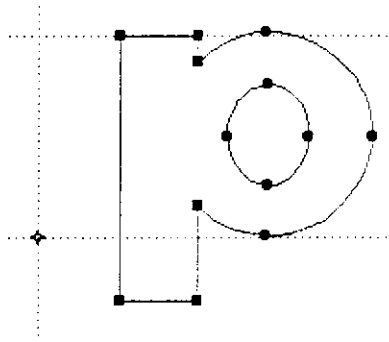
- Click "OK."



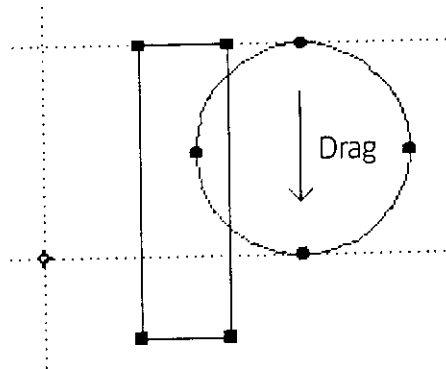
Now you have the outlines for the character "p." All that is left to do is correct path directions and then remove the overlapping areas.

- Go to the Path menu and choose "Correct path directions."
- Go to the Special menu and choose "Remove overlap."

Fontographer removes the overlapping area, and your character is complete.



- Position the selection tool to the right of the rectangle, hold down the Shift key, click and drag toward the middle horizontal guideline.



Note: As long as you hold the Shift key down, Fontographer will constrain your circle so that your points are located on the North, East, South, and West sides of the circle.

- Double-click on any control point on the circle to select all the points.
- Go to the Edit menu and choose "Copy" (⌘C).
- Go to the Edit menu and choose "Paste" (⌘V).
- Go to the Special menu and choose "Scale..."
- Enter a Horizontal value of 40% and a Vertical value of 50%. Make sure the "Center of selection" button is checked.

Scale

Scale:

☐ Uniform scaling:

100

%

☒ Other: Horizontal:

40

%

Vertical:

50

%

Center:

☐ Base point
 ☒ Center of selection

OK

Cancel

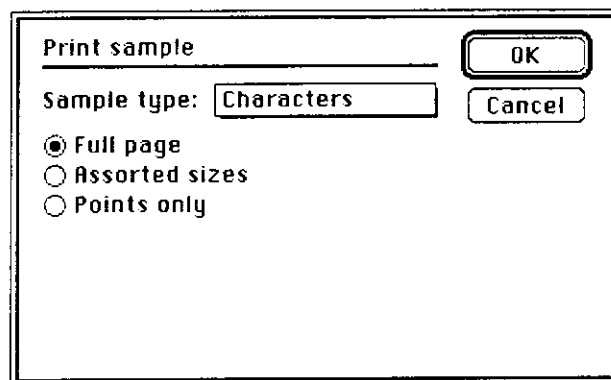
PRINTING A CHARACTER SAMPLE

You can print a sample of your new character while that character is active (which means that particular character's window is open). Make sure you have a PostScript printer attached and selected in your Chooser menu before you print.

EXERCISE: Printing a character sample

- Make sure the "p" character edit window is still open.
- Go to the File menu and choose "Print..." (⌘P).

The print sample dialog box will appear.



The print sample dialog box gives you the option of printing one giant character or a full page of characters composed of several assorted sizes. The third option, "Points only," allows you to print a sample that shows the X/Y coordinates of the character's points.

- Select "Full page" and click "OK."

The standard Macintosh print window will appear.

- Enter the number of copies you wish to print and click "OK."

Now try printing with the "Assorted sizes" option checked. If you'd like to see a full page sample of your character's X/Y coordinates (locations of all the points), print with the "Points only" option checked.

- Open the character "o" and see how your traced character looks when printed.

Before you learn how to save your font, close any character edit or metrics windows you have open.

SAVING YOUR FONT

Your fonts can be saved from either the font or the character edit window. Fontographer saves fonts via the standard "Save" or "Save as..." commands from the File menu.

EXERCISE: Saving your font

- Go to the File menu and choose "Save as..."

Important: The "Save" command will automatically save any changes and replace the original file, so make sure you use the "Save as..." command if you want to keep your original GraphicLight font intact.

- Type "MyNewFont" in the "Save font as:" dialog box.

Save font as:

MyNewFont

PROCEDURES FOR TRANSFERING FONTS TO THE MACINTOSH
AUTOMATICALLY AND SAVING POSTSCRIPT.

USING YOUR FONT

There is one more step before you can use your new font: Generating your font. Fontographer makes the font installation process really easy! You can generate the PostScript font (this tells the printer how to draw your characters) and the bitmap font (used by the Macintosh for screen display) at the same time.

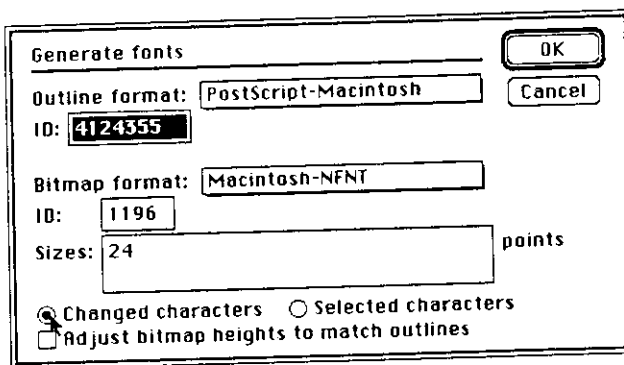
Generating PostScript and bitmap fonts for the Macintosh

Fontographer allows you the option of generating both the PostScript and bitmap fonts at once.

Note: Refer to Fontographer's *Font Installation Guide* for detailed instructions on generating and installing PostScript and TrueType fonts on the Macintosh, and PostScript fonts for use on IBM-compatible PCs and NeXT computers.

EXERCISE: Generating your font

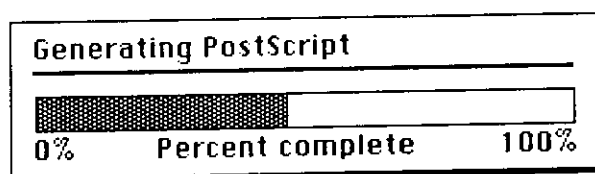
- Go to the File menu and choose "Generate fonts..."
- Fontographer's "Generate fonts" dialog box will appear.
- Click on the "Changed characters" button.



- Click "OK."

By choosing options in this dialog box, you can generate both the PostScript and bitmap fonts at once.

Fontographer's "Generating PostScript" dialog box will show you its progress.



When Fontographer has finished generating your font, you will be able to see your new revised bitmap images in the lower half of your character slots in the font window.

FONT INSTALLATION

Bitmap and PostScript fonts must both be installed properly before use. Fontographer's installation process is simple, but must be done correctly or your font will not work properly.

EXERCISE: Installing your bitmap font onto your Macintosh

Bitmap font installation must be done with Apple's Font/DA Mover, version 3.8 (on a System software disk) or greater. Earlier versions will not work properly. If you are unfamiliar with the Font/DA Mover, refer to your Macintosh Manual. In System 7.0, you will only need to drag the suitcase file into your System Folder.

- Double-click the "MyNewFont" bitmap file.



MyNewFont.bitmap

The Font/DA Mover starts up with "MyNewFont 24" listed in the left window.

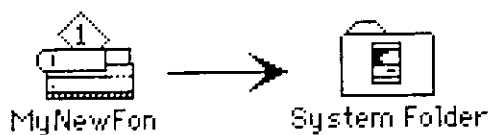
- Click the "Open" button in the right window, and open your System file (which is in your System Folder on your startup disk). Your System's fonts will appear in the right-hand window.
- Select "MyNewFont 24" and click the "Copy" button.
- Click the "Quit" button. The bitmap font is now installed and ready for use.

Note: Fontographer fonts are fully compatible with Suitcase™ and Master Juggler™. If you are using these, install your fonts according to their instructions.

EXERCISE: Installing your PostScript font onto your Macintosh

The PostScript font file has an icon which looks like a LaserWriter with a sheet of paper containing the number "1" going into it. The installation process is simple.

- Drag the "MyNewFon" PostScript font file into your System Folder, and your installation is complete.



Using your font in a document

After you have installed your font, you can use it just like any other font.

- Go to the application's font menu or font selection window and select the font.
- Type your document in that font, changing fonts, sizes, and styles as required.
- Print your document. Your Type 1 PostScript font will automatically download to be used for printing.

Congratulations! You just completed Part One of this tutorial.

Let's review what you learned. You used the "Skew" feature to create an obliqued character. You used the "Scale" feature to create five new condensed characters at once. You then created your own unique fraction without drawing a thing, traced a scanned image to create a new character, and combined that character with another to create a unique logo character containing two images. You created a new character from scratch, used Fontographer's metrics window to preview your work, and printed a sample of your characters. You also learned how to save, generate, and use your fonts. And look how easy it all was!

Now that you know Fontographer's basic steps, you can go on to create fonts of your own. Create unique characters by using the letters we've provided in the Scrapbook file you used earlier in this tutorial. Maybe there is a book somewhere with a really different font you've had your eye on that you could scan and then auto-trace. Or you might try creating something totally new... the sky's the limit!

Part Two tells you more about Fontographer's tool palette and drawing planes. Additionally, you'll learn how to adjust kerning and character width, create a ligature, paste a PostScript illustration into Fontographer, and generate an Encapsulated PostScript file that you can use in Aldus FreeHand® or Adobe Illustrator®.

PART TWO

Welcome to *Fontographer. The ABC's...* Part Two. Now that you have completed Part One, you are ready to learn more advanced techniques. Using the features you learned about in Part One, you will learn how to:

- Adjust Fontographer's control points for defining curves and shapes with precision;
- Create a ligature from your existing font, GraphicLight;
- Set character widths;
- Use the metrics window to set kerning pairs;
- Generate an EPS file; and
- Paste PostScript illustrations into Fontographer.

By the time you finish Part Two, you should be ready to unleash the typographic potential of your Macintosh!

FONTGRAPHER'S TOOLS

This section describes the tools Fontographer provides to create and edit your own and existing characters. If you are already familiar with Fontographer's tool palette, position display, and drawing planes, you can proceed to "Setting up guidelines" on page 43.

THE TOOL PALETTE

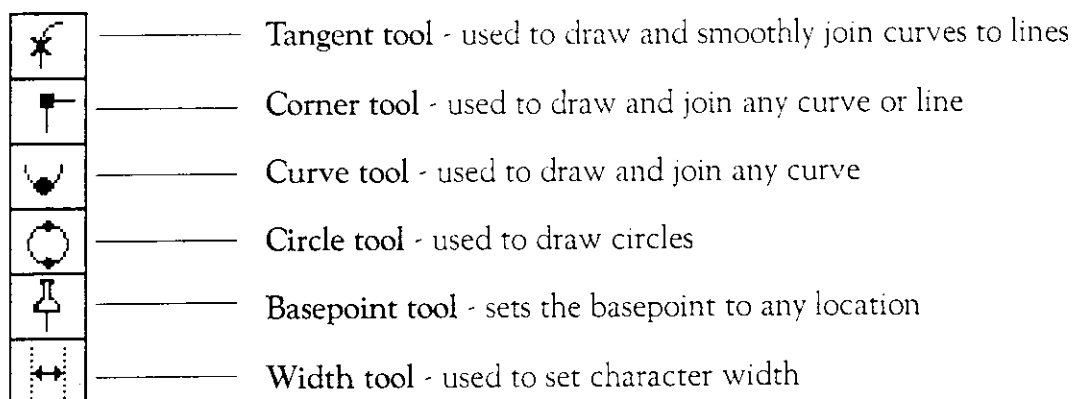
The *tool palette* is drawn on the left side of the character window. It is made up of indicators and drawing tools which are described here in the order of their appearance.



———— Drawing planes - shows which plane is active

———— Selection pointer - used to select the point(s) for editing

———— Pen tool - a multi-purpose drawing tool



Drawing planes

You select *drawing planes* by clicking on the drawing plane indicator with the mouse button. The top indicator in the tool palette shows which of the three possible drawing planes is in use. The "F" drawn with a solid outline indicates that we are drawing in the foreground layer. The *foreground layer* contains the outline of the image that you'll see when you print. Each character also has a background layer and a guidelines layer. The *background layer* can contain a scanned image or bitmap character for use as a drawing guide. The *guidelines layer* is used to construct guidelines to help you create your character.



Foreground



Background



Guidelines

The selection pointer



Below the drawing plane indicator are the tools. The *selection pointer* is the first of these tools. The selection pointer works the same as in other Macintosh programs: it allows you to select an object by clicking on it.

The pen tool



The *pen tool* is a multi-purpose drawing tool that is similar to the ones found in Aldus FreeHand and Adobe Illustrator. It lets you draw a character path without having to change tools.

CONTROL POINTS

Shapes are defined in terms of their *control points*, which may be tangent points, corner points, or curve points. These point types are designed to facilitate smooth letter construction.

Tangent points



Tangent points form a smooth joint between straight segments and curved segments. They can also be used to connect straight segments at an angle.

Corner points



Corner points are used to join straight segments to curved segments at an angle or to connect two curved segments at a cusp. They can also be used to connect straight segments at an angle (like the tangent points). The functionality of the corner point tool is also contained in the pen tool; the corner point tool exists only because it is sometimes easier to create certain paths with a tool which creates only one kind of point.

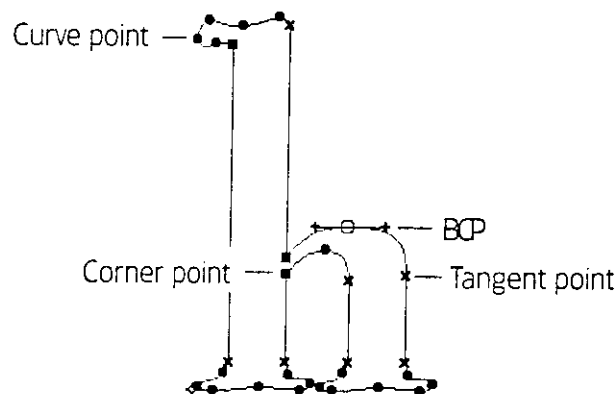
Curve points



Curve points are used to join curves to other curves smoothly. Fontographer gives you considerable control over the shape of curved segments. You exercise this control by adjusting the position of the BCPs (Bézier Control Points). Bézier curves define complex shapes with a minimum number of points. There is one BCP associated with each control point at the end of a curved segment. When a control point is selected, any BCPs associated with it are shown as a small "+." The functionality of the curve point tool is also contained in the pen

tool; the curve point tool exists only because it is sometimes easier to create certain paths with a tool which creates only one kind of point.

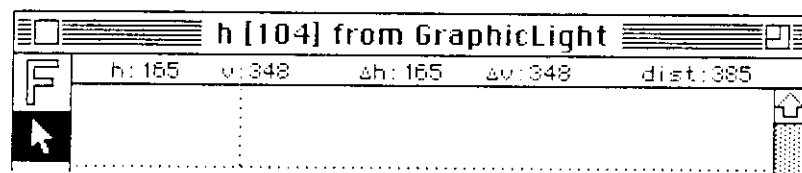
This letter "h" contains all three types of control points.



Notice that one of the curve points is active (shown graphically as a hollow shape), which makes its BCPs visible.

The position display

By referring to the position display that Fontographer provides, you can create a character very quickly and easily.



The *position display* is located just above the drawing area. The left part of the display shows the horizontal (h:) and vertical (v:) components of the pointer. You can achieve exact positioning by watching this display while moving the pointer. The right hand part of the position display shows distances between the pointer and the basepoint. While using tutorial, you will only refer to the left part of the display.

Note: Any unit values in the position display will vary slightly depending on the magnification of your screen. If your horizontal and vertical values do not coincide with those given here, choose the closest unit your screen will allow.

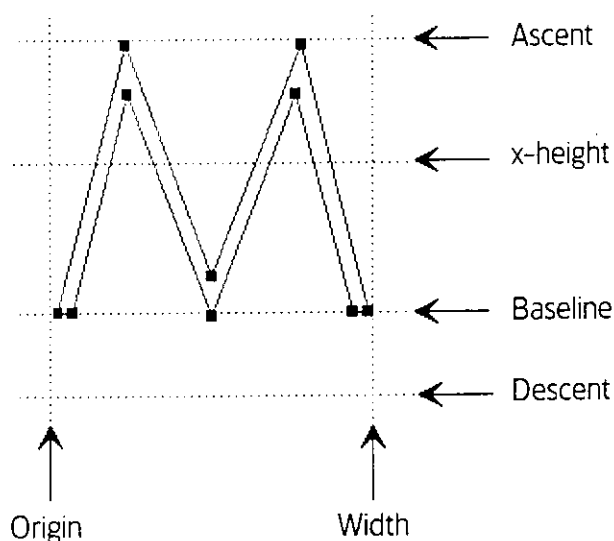
The following section explains character components like em-square, ascent, and descent in more detail. If you already know about these items, or just wish to skip this section, you can proceed to "Setting up guidelines" on page 43.

CHARACTER COMPONENTS

In order to create your own font, you should understand the major elements of characters.

EM-SQUARE

Each character's size and dimensions are described in terms of a rectangle called an *em-square*. The em-square is the outer square around the letter. The em-square is so named because it is at least as wide as the letter M (and the same height).



GUIDELINES

Guidelines show up behind every character in your font and can be used as construction lines. The guidelines layer allows you to set up your own guidelines when you create your own font.

Ascent

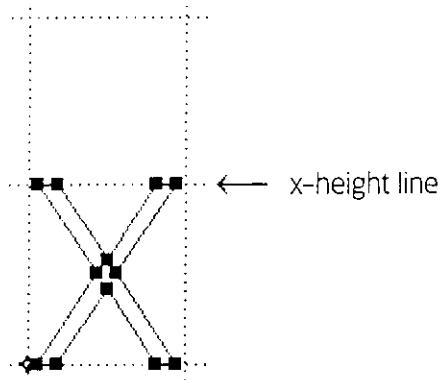
The *ascent* marks the top of the capital letters.

Descent

The *descent* line marks the lowest point of the descenders of letters such as "g" or "y."

x-height

The *x-height* line marks the top (height) of lower case letters such as "x" and "v." (This line is not always present, in which case you can draw it yourself.)



Baseline

The *baseline* is the line upon which capital letters sit. The baseline is always located at the vertical location of zero.

Origin

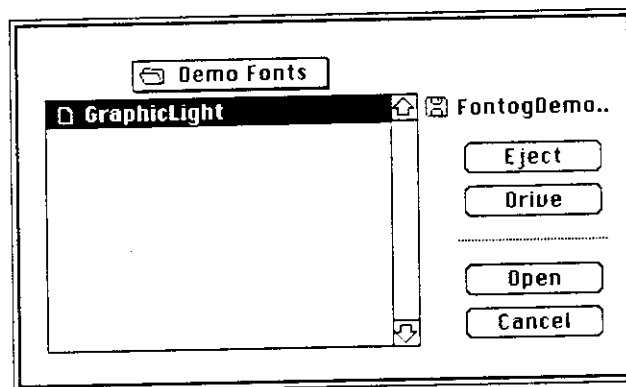
The *origin* of the em-square is always at the horizontal and vertical location of zero. This is where the "drawing pen" which paints the character should be positioned at the start of drawing the character.

Width

Width is a moveable vertical line which specifies the width of each character. When printing a line of text, the origin line of the next character is placed on top of the width line of the current character.

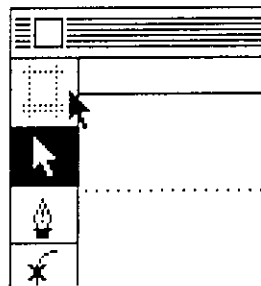
EXERCISE: Setting up guidelines

- Start Fontographer by double-clicking on its icon.
- Choose "Open font" from the File menu.
- Open the "Demo Fonts" folder.
- Select "GraphicLight" and click "Open."



Note: Fontographer allows you to open any font you wish. For the purposes of this tutorial, you can continue to use Richard Mitchell's GraphicLight.

- Open the "o" character edit window.
- Click on the drawing plane indicator until it changes to the guideline indicator.



OR

- Type "g."

Typing "f," "b," or "g" changes the drawing planes to foreground, background, and guidelines, respectively.

- Choose the corner point tool.



- Experiment by drawing and moving your own guidelines.

The guidelines you create will appear in the same relative position in all the characters. You can remove guidelines simply by deleting their points.

Note: You can use any of Fontographer's tools and options in the guidelines layer. Drawing lines or curves at odd angles may cause parts of the line to disappear due to interaction between the line angles and the dash pattern used for the line.

Before you begin the next exercise, close any open character edit windows or metrics windows you have open.

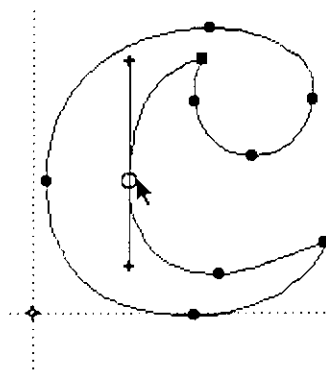
ADJUSTING CURVATURE

Now you will fine-tune a character. By dragging the control points, you can adjust the character's outlines.

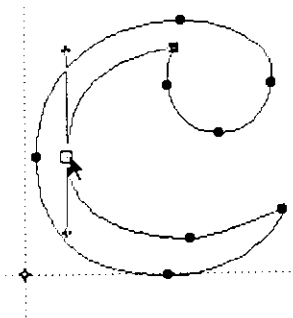
When a point is selected, Fontographer draws small plus signs at the location of the BCPs. These BCPs may be dragged around to change the curve shape in the same way that actual points are dragged. If you select several curve points, Fontographer will show all BCPs of those points and allow you to adjust each one individually.

EXERCISE: Adjusting points

- Open the "c" character edit window.
- Choose the selection tool.
- Position the pointer over the curve point to be moved or adjusted.



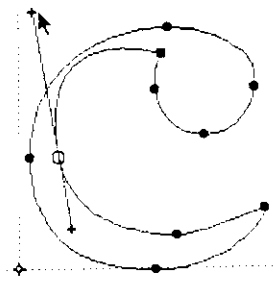
- Press and hold the mouse button, drag the control point to a new location, and release.



If the point is connected to other points, the connecting lines or curves continue to be shown during the move. Therefore, you can see the effect of the move on other control points.

You can also drag on the control point's BCP to change the curve.

- Click on the control point's BCP and drag.



You can continue experimenting with the points and BCPs by modifying this character or any of the other characters.

Note: Holding down the "Shift" key constrains the BCP to be horizontal or vertical. Curve points should normally be drawn at the extrema of the curve (the North, South, East, or West extreme points) and should have BCPs that are horizontal or vertical.

Close any open character edit windows or metrics windows before you begin the next exercise.

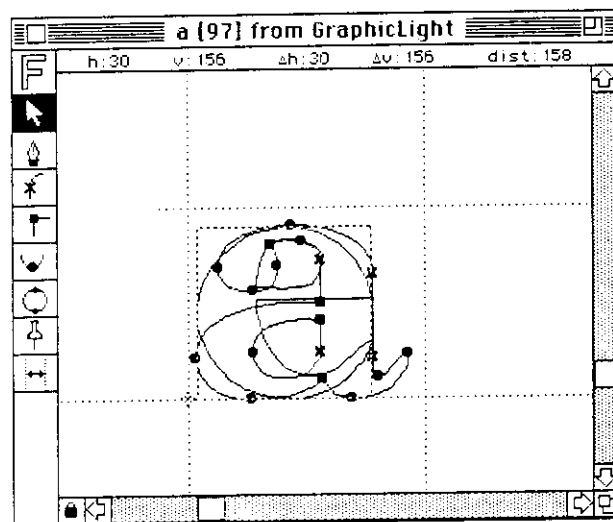
CREATING A SPECIAL CHARACTER

The first character you will create is a ligature by using Fontographer's "Remove overlap" and "Decompose composite" features.

EXERCISE: Removing overlapping areas

- Select the letter "e" in the font window.
- Choose "Get part" from the Edit menu.
- Double-click on the letter "a" so that its character edit window opens.
- Choose "Paste" from the Edit menu.

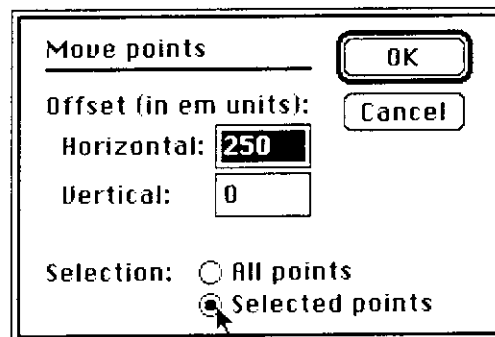
Fontographer pastes the "e" on top of the "a."



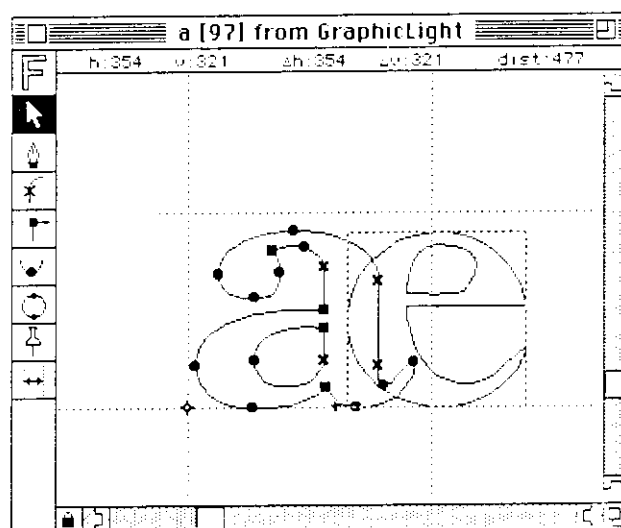
- Drag the box containing the "e" toward the right.

Or you can use the "Move..." command in the Special menu to specify exactly how much to move the character.

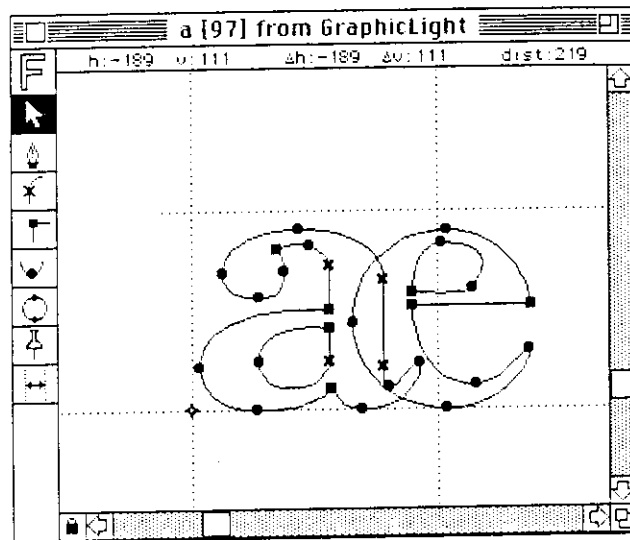
- Choose "Move..." from the Special menu.
- Enter "250" in the Horizontal Offset box, and "0" in the Vertical Offset box.
- Click on the "Selected points" radio button.



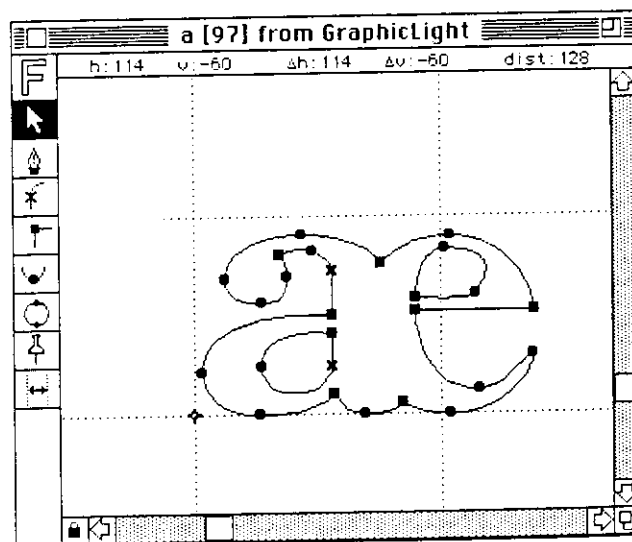
Fontographer moves the "e" to the right of the "a."



- Choose "Decompose composite" from the Special menu.

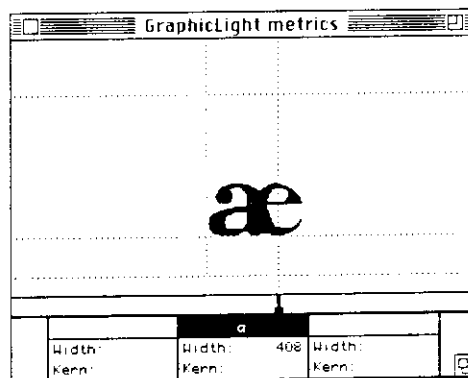


- Choose "Correct path direction" from the Path menu.
- Choose "Remove overlap" from the Special menu.



Fontographer removes any overlapping areas.

- Use the metric window to preview the character.



You just created your own ligature, without drawing a thing!

CHARACTER WIDTH ADJUSTMENT

You probably noticed the vertical dashed line that appears to run through the "e." This is the character width line. Width is a moveable vertical line which specifies the width of each character. When you print a line of text, the beginning (origin line) of the next character is placed on top of the width line of the current character. Since you changed the contents of the character edit window, it is now necessary to change the character width. As you will see, Fontographer makes this very easy.

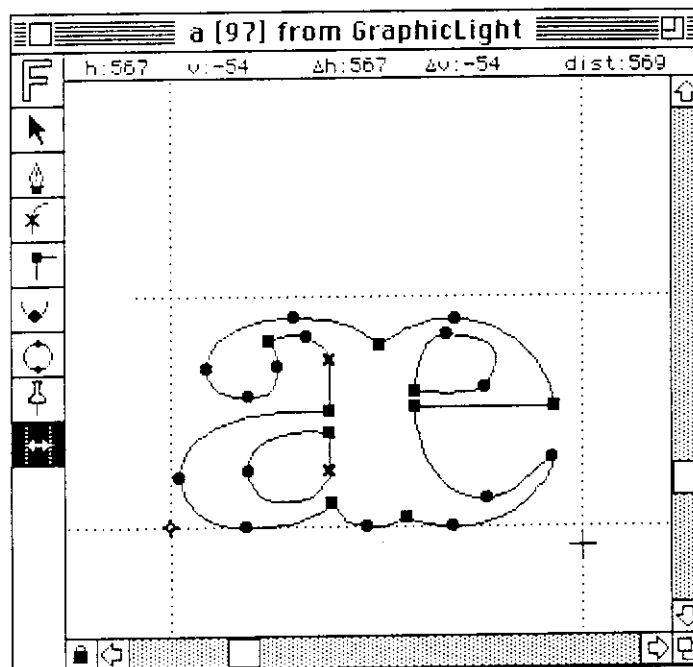
EXERCISE: Changing character width

- Make sure you still have the character window open.
- Click on the width tool indicator.



- Position the crosshair on the width guideline.

- Press and hold the mouse button, drag the guideline away from the "e," and release the mouse button.



Allow room for space between the width guideline and the outer edge of your character. Space adds to the effect and legibility of your font.

Note: You can change character width in any of Fontographer's three drawing planes.

In the next exercise, you will learn how to use Fontographer's metrics window to set character kerning information.

Close any open character edit windows or metrics windows before you begin the next exercise.

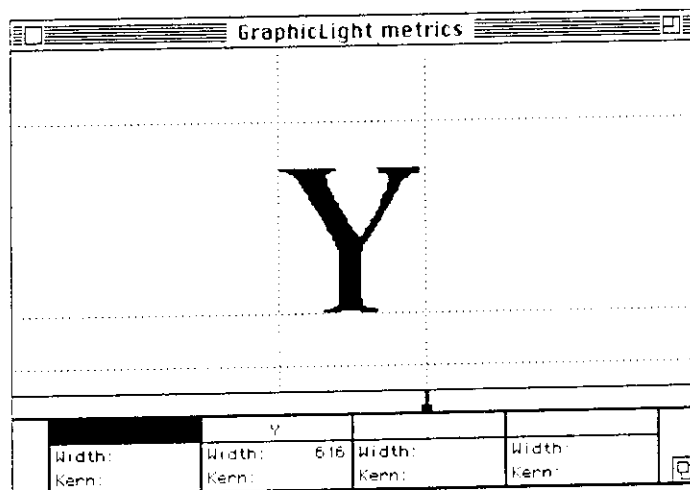
THE METRICS WINDOW

In addition to providing an excellent way to preview your characters, the metrics window allows you to set character spacing and kerning pairs. The metrics window displays several characters simultaneously and presents them as accurately as possible on screen.

EXERCISE: Opening the metrics window

- Select the "Y" in the font window.
- Choose "Open metrics" from the File menu (⌘K).

The metrics window appears.



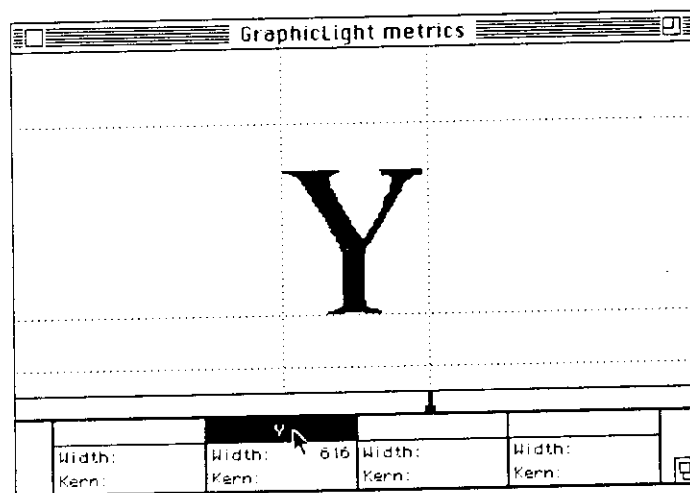
The *metrics window* has a standard title bar, zoom box, and close box. The title of the metrics window is the name of the font whose metrics are being adjusted, followed by the word "metrics." There are no scroll bars in this window, but the grow box in the lower right-hand corner allows you to enlarge or reduce the window's size simply by dragging either of the boxes.

The top portion of the metrics window is the *character display area*. The small rectangular area directly below the character display contains width indicators which are called *T-bars*. These indicators, which are shaped like an upside-down "T," mark the position of each character's width (or kern-adjusted width) and can be used to adjust width and kerning pair information.

The bottom part of the window contains the *metrics display area*. This area is divided into entry boxes, whose number is determined by the size of the window. The top section of the entry box may be empty or filled with the character name assigned to that slot. In the instance of the metrics window above, the entry box contains the letter "Y." The width of each character (and kerning, if any) is displayed directly below the character name.

EXERCISE: To select an entry

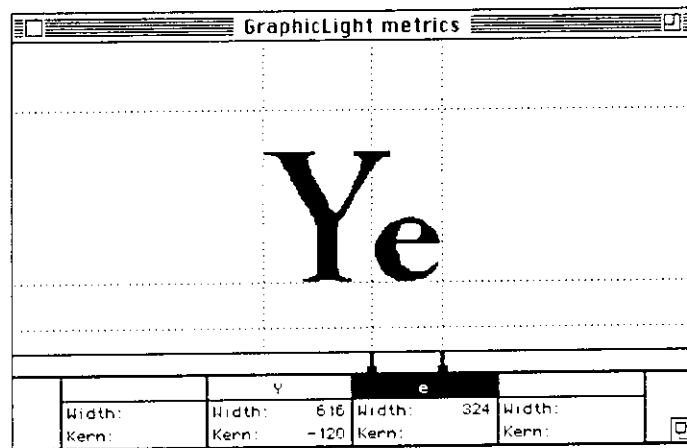
- Position the pointer on the label of the entry you wish to select, and click.



The selected character's name becomes highlighted in the metrics display area. A character must be selected in order to make any adjustments to it. Additionally, an entry must be selected to replace or change the character assigned to that entry box.

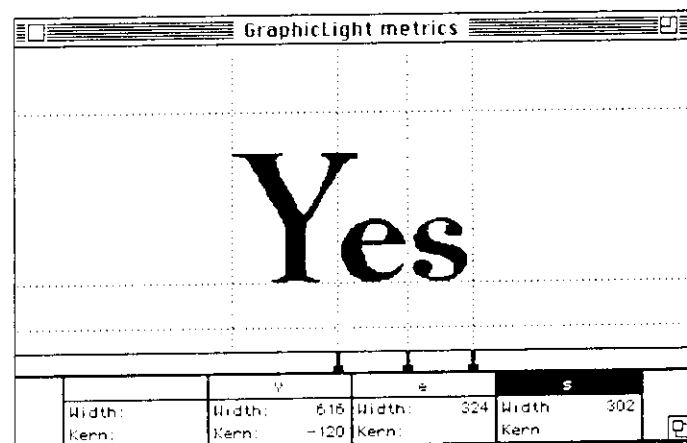
EXERCISE: To select and enter another entry

- Position the pointer on the label to the right of the "Y" and click to select it.
- Type the letter "e."



You can select and enter an entry another way:

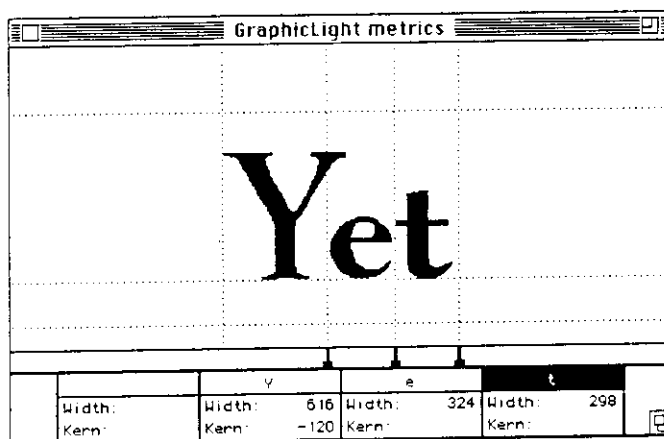
- Press the Tab key.
- Type the letter "s."



EXERCISE: Changing the character assigned to an entry

- Select the "s."
- Type the letter "t."

The word "Yes" changes to "Yet."



- Type the letter "s" again and the word "Yes" reappears in the metrics window.

In the next exercise, you will adjust kerning pairs automatically and manually.

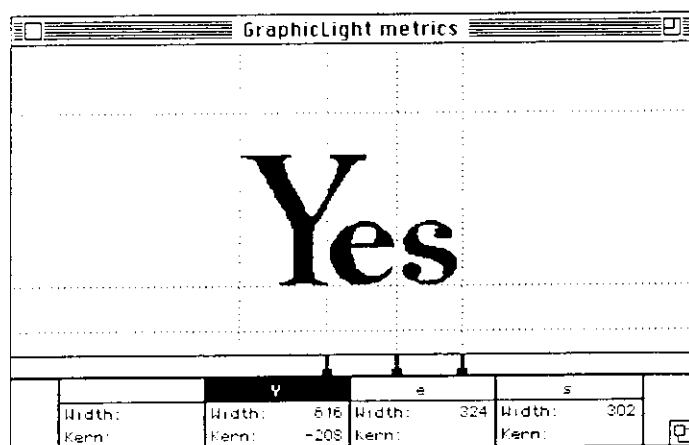
DEFINING KERNING PAIRS

Kerning improves appearance and legibility by reducing the white space between certain characters, such as "Ty," "To," and "ye." Fontographer's manual kerning capability allows you to move letters either closer or farther apart to adjust and improve the space between them.

Kerning pairs are set by holding down the Option key and dragging the T-bar of the left character of the pair. This sets an adjustment which will be applied whenever this character and the character in the entry to its right appear together on the same line. Fontographer can only apply kerning if there is a character referenced in the entry to the right.

EXERCISE: Adjusting kerning

- Select the "Y" in the word "Yes" in the metrics window.
- Hold down the Option key, position the pointer over the T-bar, and drag it to the left.



As you can see, you adjusted the kerning to -208 em-units. You can manually adjust the T-bar until you are satisfied with the way this kerning pair looks.

IMPORTING KERNING PAIRS

Fontographer allows you to import kerning tables from either Adobe Font Metrics (AFM) files or bitmap font files. If your font does not have a specific kerning pair defined in the AFM file, Fontographer will add it to your kerning table. If your font includes this kerning pair, Fontographer will replace the old pair with the new kerning table information.

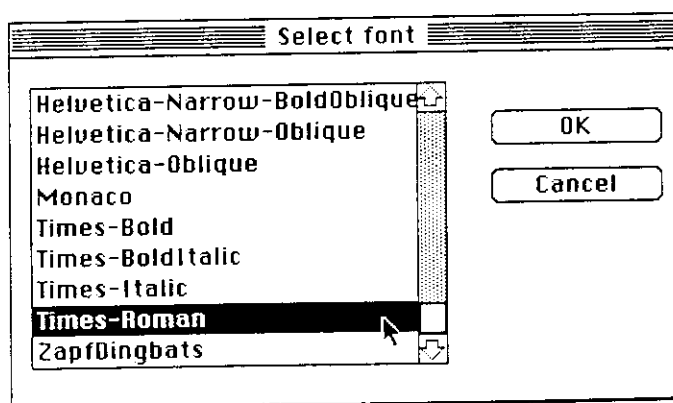
You are going to import a kerning table from the bitmap file for TimesRoman. The kerning information will change the appearance of the characters in the word "Yes."

EXERCISE: Importing a kerning table from a bitmap file

- Choose "Import kerning. . ." from the File menu.

This presents the standard file selection dialog, which allows you to choose a font file. The file selection dialog works in the standard fashion, so you can change drives, eject disks, open a file, or cancel. So you can open a font from a folder on your hard disk or on a server, from a suitcase in your System Folder, or directly from your System.

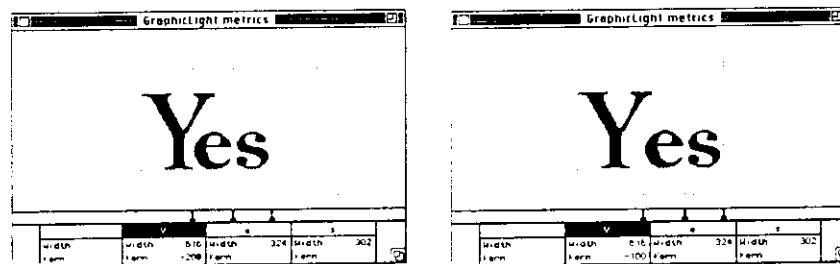
- Select the Times-Roman (or any other) bitmap font file.



- Click "OK."

Fontographer automatically applies the new kerning table information to your font.

You can see the difference in the two screen shots below:



You can also remove all kerning pairs from your font.

EXERCISE: Clearing kerning pairs

- Select "Clear kerning pairs" from the Edit menu.

Once you confirm that you wish to complete this action, Fontographer automatically clears all kerning pairs from your font.

Note: Keep in mind that some word processing programs do not support kerning, but most page layout programs do.

Before you go on to the next section, close any character edit windows or metrics windows you may have opened.

Note: You should not "Save" this font. You should "Revert" back to the last saved version of your font. Remember that you can only "Revert" when the font window is active.

GENERATING EPS FILES

In addition to fonts, Fontographer generates Illustrator 1.1 format EPS (Encapsulated PostScript) files. Programs such as Aldus FreeHand and Adobe Illustrator can read this particular EPS file format directly for editing purposes. And once you open your EPS file, you can add or delete points, reshape or distort characters, change the stroke weight, or fill characters with a specific color or pattern.

EXERCISE: Generating an EPS file

- Click on the font window to activate it.

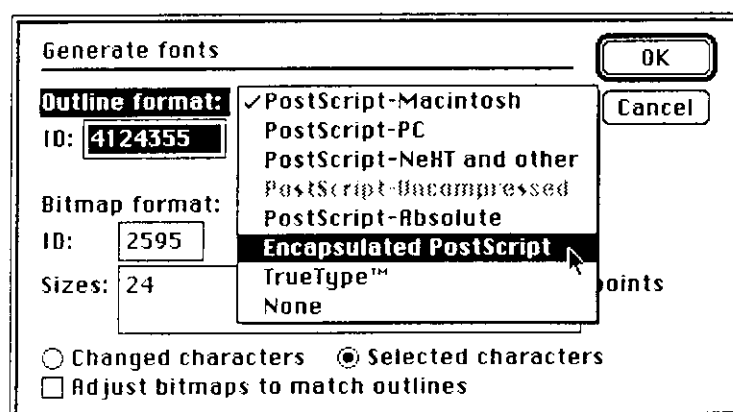
Fontographer will only generate fonts from the font window.

- Hold down the Shift key and click on the "a," "c," and "f."
- Choose "Generate fonts..." from the File menu.

Fontographer's "Generate fonts" dialog will appear.

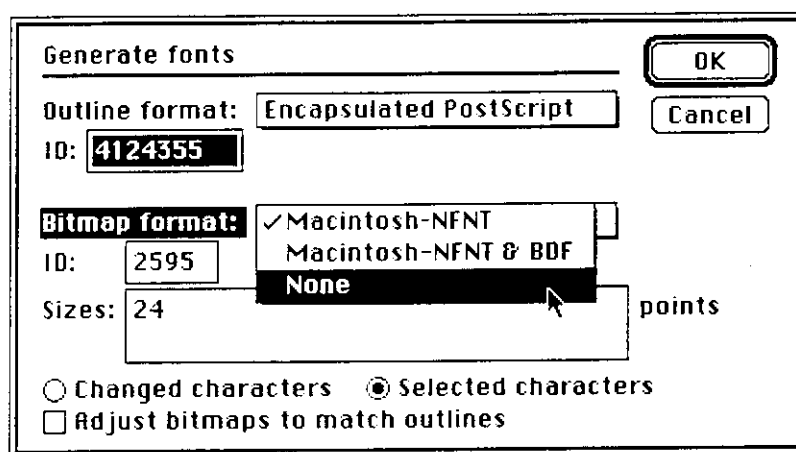
It is possible to generate several different kinds of fonts from this box, however in this exercise you will only generate an EPS file.

- Position the pointer on the "Outline format:" popup menu and drag down to select "Encapsulated PostScript."



It is not necessary to generate a bitmap when you generate an EPS file.

- Position the pointer on the "Bitmap format:" popup menu and drag down to select "None."

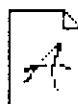


You have the option of generating only the characters that have changed since the last time you saved the font, or characters that you select in the font window.

- Make sure the "Selected characters" option is checked.

Note: If you generate with the "Selected characters" option checked, the only characters in your EPS file will be those you specifically selected for generation.

Fontographer names your EPS file using the font name followed by ".art." Since you generated GraphicLight, Fontographer names the file GraphicLight.art and looks like the icon below.



GraphicLight.art

The illustration below shows the converted font that we opened using Aldus FreeHand. After you "Ungroup," you can activate all the points and BCPs (like the "c") and apply the features of this program to your characters.

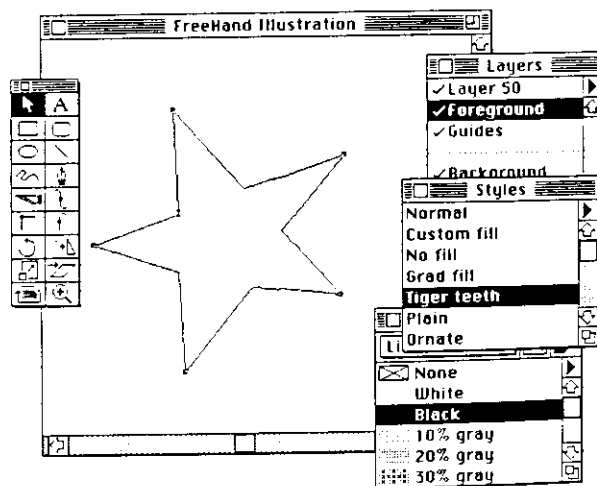
acf

PASTING POSTSCRIPT ILLUSTRATIONS

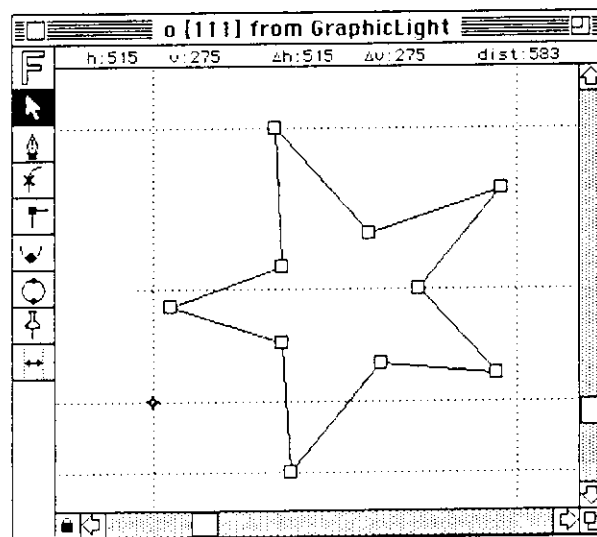
You can also paste your Aldus FreeHand and Adobe Illustrator images directly into Fontographer's character edit window. This procedure works best in MultiFinder.

EXERCISE: Pasting your PostScript Illustration

- While you are in Aldus FreeHand (or Adobe Illustrator), select the graphics you wish to copy.



- While holding down the option key, select "Copy" from the Edit menu.
- Click on Fontographer's character edit window to select it.
- Select "Paste" from the Edit menu. The path data will be pasted into your character and scaled to fit within the em-square.



Holding down the Option key while pasting the image will scale the outline from the baseline to the ascent, instead of the normal method of fitting it into the em-square.

Note: This option only accepts outline path data (i.e., points). It ignores bitmap PICT data, TIFFs, text, and special effects (i.e., graduated fills).



Using your font in a document

After you have installed your font, it may be used like any other font.

- Select the font from the application's font menu, or the font selection window.
- Type your document in that font, changing fonts, sizes, and styles as required.

Note: When you use the font you created with this demonstration, you will only be able to see the letters "a" through "o." Additionally, the printed version of those letters will contain a small triangle at each character's origin.

- Print your document. Your Type 1 PostScript font will automatically download to be used for printing.

Congratulations! You have just finished "Fontographer, The ABC's... Part Two."

Let's review what you accomplished. You learned about Fontographer's tool palette and how to use its control points. You learned about character components and how to set up guidelines. You changed a character's curvature by adjusting control points, and created a special character by removing overlapping areas and adjusting character width. You also learned how to use the metrics window to adjust, import, and clear kerning pairs. And finally, you generated EPS files and pasted PostScript illustrations directly into Fontographer's character edit window.

Now that you know Fontographer's basic steps, you can create characters of your own. Combine what you've learned in this section with the basics you learned in Part One, and you'll be creating a professional typeface in no time.

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Fontographer

Addendum

Version 3.3

This booklet contains information about the new features and modifications included in the Fontographer 3.3 upgrade. You should use this addendum as a companion to your Fontographer User's Guide and Tutorial. Chapters and page numbers precede each new entry, so that you can make notes in your User's Guide.

Whether you are an experienced user, or a newcomer to Fontographer, you should keep this booklet with your User's Guide or other 3.1 addendum. If you are receiving this addendum along with your upgrade from Fontographer version 3.2 to 3.3, replace your previous 3.2 addendum with this new updated version. Read through this addendum to find out what is new and what has been changed since the publication of the User's Guide or version 3.1 addendum.

If you are a new Fontographer user, you should familiarize yourself with the program by working through our tutorial, *The ABC's of Fontographer*.

Fontographer version 3.3 includes new features, including the ability to open and generate TrueType fonts for use on the Macintosh and IBM-compatible PCs.

Fontographer 3.3 generates:

- TrueType fonts for the Macintosh and the PC.
- Standard PC Type 1 PostScript language fonts which are compatible with Adobe Type Manager (ATM) running under Windows 3.0 on IBM-compatible personal computers (PCs).
- PostScript font files that can be used on NeXT computers.

We have added some extra features which include the ability to:

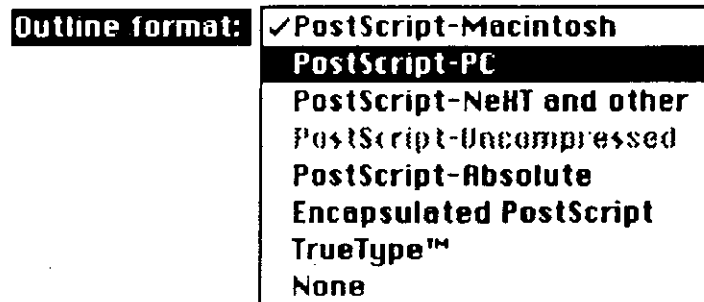
- Show or hide points with a key combination;
- Move to precise point locations with key combinations; and
- Adjust bitmap heights for characters with ascents and descents larger than the em-square area.

New font formats

Add to page 4.5...

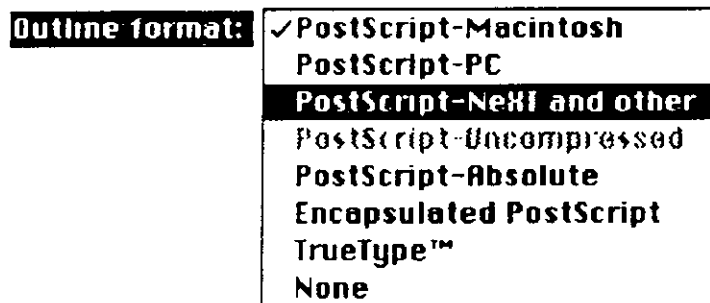
We've added three new menu items to the "Outline format" dialog:

PostScript-PC



Choosing this option generates a Type 1 PostScript font for use with Adobe Type Manager (ATM) running under Windows 3.0 on IBM-compatible personal computers.

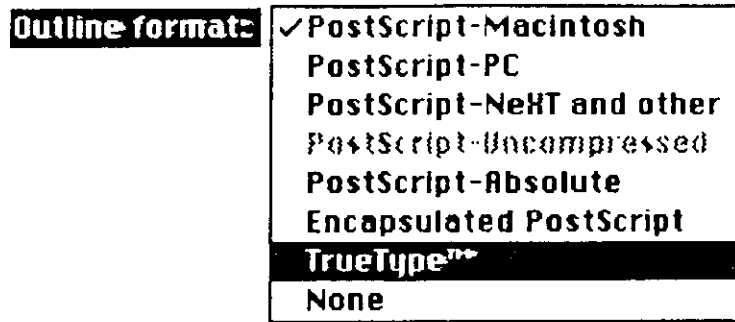
PostScript-NeXT and other



Choosing this option generates a Type 1 PostScript font for use with non-Macintosh computers such as DEC and NeXT. For information on how to install these fonts, refer to Altsys' Font Installer Guide or the NeXT font ReadMe file on your Fontographer "Tools & Utilities" disk. If you are generating fonts for DEC or NeXT and need more explanation, please call our Technical Support Department at (214) 680-2093 for assistance.

When you generate a Type 1 font, PostScript-Uncompressed is disabled. This is because PostScript-Uncompressed only generates Type 3 fonts.

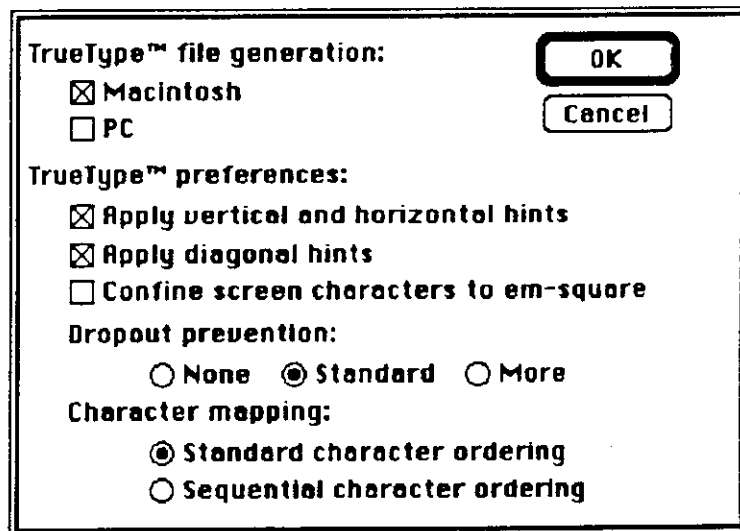
TrueType



Choosing this option generates a TrueType font for use on the Macintosh and on IBM-compatible PCs running Windows 3.0.

TrueType Preferences

There is a completely new TrueType Preferences box, which appears when you choose "TrueType" and click "OK."



The "TrueType preferences" option provides control over some aspects of the TrueType conversion process. You can select the type of hints that will be used to instruct the character, select the amount of dropout control that is to be used when the characters are imaged, and select whether you would like standard or sequential character ordering. Each of these preferences is explained in the following paragraphs.

TrueType file generation:

You have the option of generating TrueType for the Macintosh and the PC (at the same time or individually). At this time, Windows does not support TrueType. However, Microsoft® has announced support for TrueType in future products.

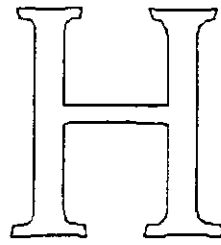
TrueType preferences:

Apply vertical and horizontal hints

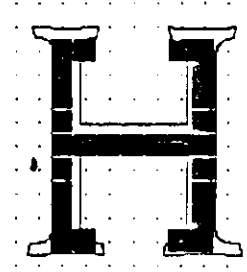
Add to page 15.2...

When a TrueType character (known as a glyph) is displayed on screen or printed, its outlines are scaled to the size required by the resolution of the target device. If this scaled outline were to be displayed or printed without modification, the result might not be very pleasing. This is because the scaling of the outline by itself does not take into account where the individual dots or pixels will be drawn. Therefore, a vertical stem of a character might fall between pixel boundaries and not show up at all on the screen. To prevent problems like this, each glyph can have a set of instructions which are used to fit the character to the grid of pixels for a particular device. These sets of instructions are known as hints. After the hints have been applied to a glyph, its outline is actually distorted, but in such a way as to conform to the underlying grid so that the important features of the character will be drawn correctly.

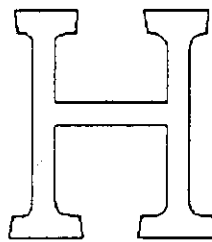
These diagrams illustrate how hints improve the appearance of TrueType characters.



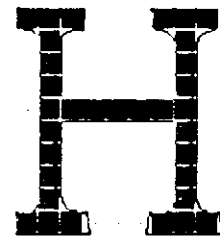
Unhinted outline



Bitmap from unhinted outline



Hinted outline



Bitmap from hinted outline

The TrueType instructions for each character are based on identifiable character features. Stems and serifs are the two most common character parts which benefit from vertical and horizontal instructions.

Apply diagonal hints

Characters such as the "A" and "V" have diagonal stems which are important character features. Normally the best results can be obtained by applying both vertical and horizontal hints when the TrueType font is generated. There are some fonts, however, which may look better if one or both of the hint types are not used. Japanese and Chinese characters, for example, often have a large number of contours. This can result in "over-hinted" characters. If your font doesn't generate well, try setting the preferences so that diagonal hints are not applied.

You may want to generate a TrueType font composed of unhinted outlines. Script typefaces (or those without straight lines) look best if you don't apply regularizing features like hints. You can set the preferences so that neither vertical, horizontal, nor diagonal hints are applied.

Confine screen characters to em-square

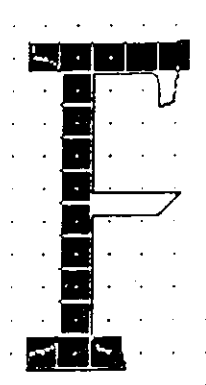
By choosing this option, if you drew your characters above the ascent or below the descent line, Fontographer scales them vertically to fit within the em-square. If this option is not checked, Fontographer defaults to adjust (or expand) the em-square to fit the character. You should be aware that these types of characters could affect your leading (unless your program supports negative leading).

Dropout prevention

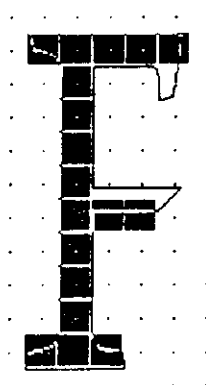
A "dropout" occurs when both sides of a character's line or curve fall between pixel boundaries. A dropout is said to have happened when an important feature of a character fails to appear at all. Fontographer provides three levels of dropout control. If you select "None," the TrueType Fontscaler will not attempt to find and correct dropouts. "Standard" dropout control will eliminate nearly all dropouts. "More" will eliminate all dropouts but will sometimes turn on bits which weren't wanted. The following illustrations show the results obtained using the three levels of dropout prevention. The first "F" character is missing its cross bar because it happens to fall between two pixel boundaries. With "Standard" dropout prevention, the feature is restored.

Dropout prevention:

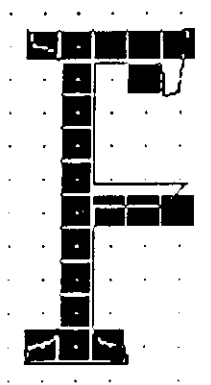
☐ None ☒ Standard ☐ More



No dropout
control



Standard dropout
control



More dropout
control

Notice that the outline at the right side of the top bar descends below the bar. This type of structure is called a "stub." The character would conform to the intended outline better if a pixel were turned on in this area. Standard dropout prevention will not find stubs. The third character was drawn with "More" dropout prevention. It obviously has too many pixels turned on. Due to a quirk in the TrueType Fontscaler, the pixel that is turned on is to the left of the end of the bar. It is likely that future revisions of the Fontscaler will not exhibit this behavior.

Character mapping

Most of the time, you will never change the default, which is "Standard character ordering." Choosing this option gives you a normal font with all the characters you would expect, in the places defined by Apple for a standard TrueType font.

Sequential character ordering, on the other hand, means that in the generated TrueType, characters are stored in the same order as they were defined in the original font. This is useful for foreign character sets, and other non-standard fonts. This is really of marginal use; unless you are a real font guru, don't worry about it.

TrueType bitmaps

It is not necessary to have a bitmap with TrueType, so Fontographer does not generate one when you generate your outline file. If you wish to put bitmaps into the TrueType suitcase and are using System 7.0, simply drag the bitmap file on top of the icon for the TrueType suitcase file from the Finder. If you are using System 6.07, you will need to place the TrueType INIT into your System Folder in order to use your TrueType fonts. You can get this INIT from your Apple dealer. Install your fonts in the normal manner using Font DA/Mover (version 4.1). If you are generating TrueType fonts for the PC, you can set the Bitmap format to "None," since TrueType fonts do not require bitmaps.

The Point Menu

Accurate point placement

Add to page 7.22...

Another new feature has been added to the "Location" dialog. You can now move the location dialog anywhere on your screen so that you have unobstructed viewing of the points you are setting.

	Horizontal	Vertical	
Point: 27	530	592	OK
Incoming BCP: 495	495	618	Cancel
Outgoing BCP: 568	568	563	Next %]
			Prev %[

Any changes you make in the "Location" dialog are immediately reflected in the character window. In addition to being able to use the "tab" key to move through the fields, new "Quick key" commands have been added to the next point and previous points buttons.

To select the next point in the path:

- Click the "Next" button or type "⌘].".

To select the previous point in the path:

- Click the "Previous" button or type "⌘[.".

To retract BCPs into their point:

- Type "⌘O."

The BCPs will move (or disappear from view) into their point.

Type the same command again and the BCPs will reappear.

Pressing the "Cancel" button will undo everything you did in the location dialog and restore the character to its original state.

Note: Choosing "Undo" from the Edit menu will also undo everything you did in the location menu, since selecting it is considered one action.

Show and hide control points

Add to page 7.32...

To show and hide points:

You can hide points when the character edit window is locked by pressing the Option key and typing "P."

To show points again, press the Option key and type "P."

Set basepoint

Add to page 7.61...

You can now undo "Set basepoint" (⌘=).

- Choose "Undo" from the Edit menu.

Character width

Add to page 8.8...

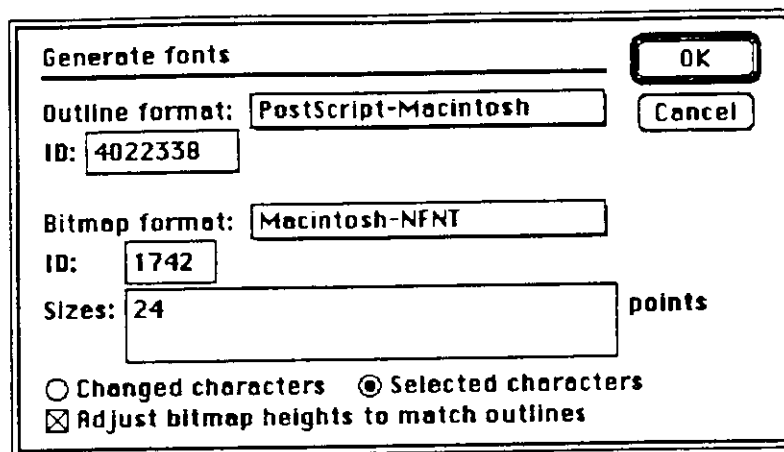
Keyboard command for changing character widths:

Holding down the Shift key while dragging the character in the metrics window will change the character's width and offset.

Adjust bitmap heights to match outlines

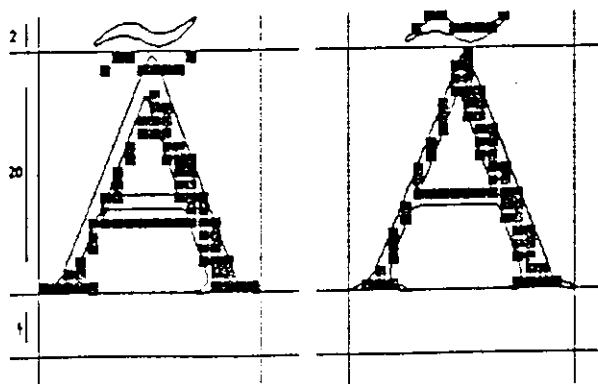
Add to page 4.4...

We've added a new feature to the "Generate fonts..." dialog.



You can choose the option "Adjust bitmap heights to match outlines" to prevent bitmaps from being distorted to fit within the em-square on characters with larger ascents and descents.

For example, if a character is normally 24 points in size, and you have a special accent that extends above the ascent, usually the character's bitmap is condensed to fit within the em-square (as shown in the example on the left). When you choose the "Adjust bitmap heights to match outlines" option, your bitmap is accurately depicted on screen. Therefore, instead of having a bitmap that is condensed to fit within the 24-point size, you may have a bitmap that is 26 points in size (as shown in the example on the right). You should be aware that your leading may be affected in some programs if you choose this option.



The Bitmap ID Field

Add to page 4.15...

You have the option of assigning your own font ID number when you generate your bitmap (in the Bitmap ID Field). Otherwise, Fontographer will automatically pick a unique ID number that is not currently installed in your system.

Style Merger

We have included our new utility, Style Merger™, on the Fontographer disk.

Style Merger takes styled fonts and merges them into one font family. Style Merger will work with both PostScript® and TrueType™ fonts. Style Merger never affects any fonts or font files on your computer; it simply reads existing fonts and creates new files.

Style Merger allows you to quickly and easily build a family containing Plain, Bold, Italic, and BoldItalic fonts. So if you use Fontographer to create four styled fonts of the same typeface, Style Merger can merge the four separate fonts into one family, thus saving space in your font menu.

Style Merger is so easy to use that the complete instructions are included on the next few pages.

How To Use Style Merger

Using Style Merger is very easy.

To start Style Merger:

- Double-click on its icon.
- Choose the Plain font for your new family.
- Then choose which fonts should be the Bold, Italic, and BoldItalic faces.
- Save the new family. That's all there is to it!

Style Merger's main window is mostly a collection of buttons. The button that you should press next always has a bold outline around it, to guide you through the family building process (hitting the carriage return always has the effect of clicking on the currently bolded button). Buttons which you are not supposed to press at a particular time are dimmed so that you can't press them and get into trouble.

On the left side of the window are the style buttons: Plain..., Bold..., Italic..., and BoldItalic.... When you start up Style Merger, Plain... is the only button you can initially press (other than Help, which is always available). In addition, Plain... has a bold outline around it, indicating that this is the button you should press first.

Pressing Plain... begins the process of creating a family.

A file selection dialog box appears, allowing you to choose your fonts. Say you choose Times-Roman, because that is the Plain style of Times. Clicking Plain... always wipes out any previously selected fonts and allows you to start over. So if you are making a family, and you choose the wrong fonts by accident, simply press Plain... to automatically remove your mistakes and start over.

Once you have chosen the Plain face and OK'ed the file selection dialog, you will see the name of your Plain font appear to the right of the Plain... button. There is also a little font file image there,

which changes from gray to black, indicating that a Plain font has been selected. In addition, the default new family name will appear just above the Save Family... button on the right. This name can be changed when you press the Save Family... button. You will notice that the Save Family... button is currently disabled. This is because you haven't yet chosen any styled fonts to merge into a family.

Now that you have chosen a Plain face, Style Merger enables the Bold..., Italic..., and BoldItalic... buttons, and it puts a bold outline around the Bold... button, indicating that this would be a good button to press next. Of course, you can choose the Bold, Italic, and BoldItalic styles in any order you want, so you could choose Italic next if you felt like being a rebel. To continue with the example, however, you should just click on the Bold... button and do them in order. Clicking on the Bold... button brings up the file selection dialog again, just like it did for Plain. This time, however, choose the Bold style, which in this example is Times-Bold. Once you have OK'ed the file selection dialog box, the name Times-Bold appears next to the Bold... button, and the Save Family... button becomes active. *This is because you could save the family at this point, and be finished. This is useful when you don't have all four styles to merge into a family.*

Style Merger bolds the Italic... button next, so just choose Times-Italic as the italic face, and Times-BoldItalic for the bolditalic face. Looking at the Style Merger window, you can see that each style button has a name beside it, indicating that you can build a complete family now. And sure enough, Style Merger has bolded the Save Family... button to tell you to do so. When you press that button, a dialog box appears asking where you should save the family and what you should call it.

Typically, Style Merger will suggest a name like "Times-Roman.fam." This will be the name of the file Style Merger creates. The part of the name before the period is what the font will be called in your font menus. For instance, if I accept the name "Times-Roman.fam," Style Merger will create a file named Times-Roman.fam, and when I install that new family, I will see Times-Roman in my menus. *If I want to see just "Times," I should tell Style Merger to save the family as "Times.fam."* After you press OK in that dialog box, Style Merger

Helpful Hint #2

Please, do yourself a favor, and always make sure the fonts you use to build families with are not installed. Always use Suitcase™, Master Juggler™, or whatever you installed them with, to close the fonts first; then build your family and reinstall your fonts. If you are using Style Merger, and you notice that the little suitcase icons change to capital A's and B's, that means that the font you have just chosen was already installed. In technical terms, you are hosed at this point, and you may have to restart your Macintosh. If you have never heard of Suitcase, or Master Juggler, or "installed fonts," then don't worry; you most likely will not encounter this situation.

Helpful Hint #3

You might not always want to combine different fonts into one family. If you use Adobe Type Reunion™, you will want to keep the font files separate. Merging them into one family prevents Type Reunion from putting its little popup style menu next to that font in your font menu. However, if you have some fonts which are inexplicably named peculiar things like B Times Bold and I Times Italic, and you are sick of having your fonts spread all over your font menu (grouped together under B's and I's and BI's), Style Merger is the answer. Style Merger can, for example, take Times, B Times Bold, I Times Italic, and BI Times BoldItalic, and build them all into Times. That will remove unwanted clutter from your menus. The Bold, Italic, and BoldItalic styles will still be in your computer, but you now access them via the Style menu. For instance, instead of changing fonts from Times to B Times Bold, simply change the style to Bold, and you will have accomplished the same thing.

That's all there is to it!

Now you know everything there is to know about Style Merger. Altsys hopes that Style Merger will prove useful to you, and that it will make your other Altsys packages even more productive. There is little that can go wrong with Style Merger, but if you have any questions, please don't hesitate to call our technical support staff. Altsys has always had free, unlimited technical support for all our products, and we encourage our customers to take advantage of it. Enjoy Style Merger!